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ABSTRACT

In order to evaluate the extent to which recommendations from a previous study had been implemented, a follow-up review of the Virginia Community College System (VCCS) was conducted by the Joint Legislative Audit and Review Commission (JLARC) in 1990. This eight-part report reexamines the key findings from the earlier report and examines a number of new issues currently facing the VCCS. Section I provides an overview of the VCCS, including the history, mission, organization, enrollment trends, and resources of the system. In addition, a brief summary is provided of the issues examined and the research methods used in the study. Chapter II discusses issues related to expansion of the mission of the VCCS. Chapter III examines funding and internal and external budget considerations. Curriculum oversight and management are reviewed in Chapter IV. Chapter V discusses academic staff, including faculty and counselors. A review of the status of partnerships with senior institutions, secondary schools, and the business community is provided in Chapter VI. Chapter VII examines planning and the status of VCCS management information systems. The organization of the system and the system office are discussed in Chapter VIII. An attached appendix provides agency responses to an earlier version of the review. (JMC)

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Joint Legislative Audit and Review Commission

The Virginia General Assembly

Review of The Virginia Community College System

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FOLLOW-UP REPORT OF THE
JOINT LEGISLATIVE
AUDIT AND REVIEW COMMISSION ON

Review of the Virginia Community College System

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

SENATE DOCUMENT NO. 4

COMMONWEALTH OF VIRGINIA
RICHMOND
1991

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Philip A. Leone

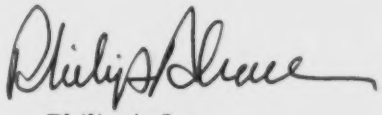
Preface

The 1989 General Assembly, in Senate Joint Resolution Number 135, requested a review of the Virginia Community College System (VCCS). This study is a follow-up to the 1975 JLARC review of the VCCS. The review provided the Commission with the opportunity to revisit an agency and evaluate the extent to which recommendations from a previous study have been implemented. The study was broadly designed to examine the progress made by the VCCS with regard to the 1975 findings as well as a number of current issues.

The 1975 JLARC report commended the VCCS for developing a comprehensive, accessible system of community colleges in a relatively short period of time. The report also identified a need for improved day-to-day management in both academic and administrative affairs. The current study shows that the VCCS has made significant progress with regard to nearly all of the major findings from 1975, but operational improvements are still needed in a number of areas. For example, curriculum oversight should be strengthened. Also, system-wide articulation agreements should be developed with all senior institutions. These and other operational problems are described in detail in the text of the report.

The major challenge facing the VCCS in the 1990s is the need to balance growth with limited resources. Over the years, the VCCS has chosen to expand its programs and services beyond those specified in statute. Currently, there are signs of increasing stress on the resources of the VCCS. Higher education enrollments are expected to grow in Virginia in the coming years, and the VCCS will be expected to help meet that demand. As this occurs, the VCCS will find it difficult to continue all of its current programs, especially in light of the State's current fiscal condition. The State Board for Community Colleges will be faced with prioritizing the program areas of the current mission. This would ensure that adequate resources are available for the highest priority activities.

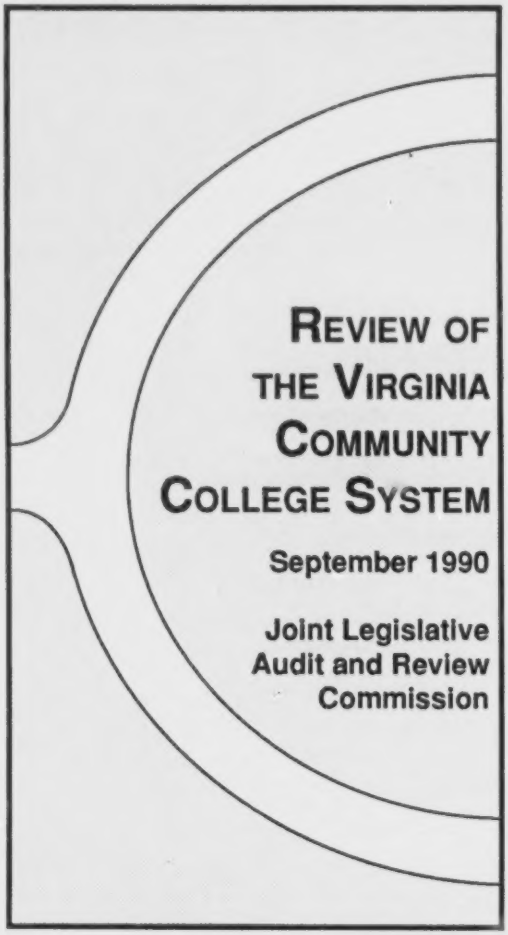
The VCCS expressed general agreement with the findings and recommendations of the study. VCCS staff have already begun work on addressing some of these problems. On behalf of the JLARC staff, I wish to express our appreciation for the cooperation and assistance extended by members of the State Board for Community Colleges, the VCCS Chancellor, the staff of the VCCS system office, the presidents and staff at each of the community colleges, and the staff of the State Council of Higher Education for Virginia.



Philip A. Leone
Director

September 10, 1990

JLARC Report Summary



The Virginia Community College System (VCCS) was founded in 1966 for the purpose of broadening the base of higher education in Virginia. The VCCS is organized as a single, statewide institution of higher education governed by the State Board for Community Colleges. The system consists of 23 community colleges located throughout the Commonwealth, and a system office located in Richmond. The community colleges provide a variety of educational opportunities, serving over 130,000 students per semester through a variety of programs and services. The VCCS is the largest institution of higher education in the Commonwealth. During FY 1989, $180 million in general funds were appropriated in support of the VCCS.

Although the VCCS is a State agency, the community colleges have close ties to their communities. Each college has a local board which acts as a link between the college and the community. In addition, citizens advisory councils help the colleges develop programs to meet the training needs of local businesses. Many colleges offer courses and services specifically tailored to the needs of the community.

At the time of the first JLARC evaluation in 1975, the VCCS was commended for developing a comprehensive system of community colleges which were generally accessible throughout the Commonwealth in terms of admissions, tuition, and educational programs. Academic staff were committed to the community college philosophy, and students were generally satisfied with the programs and services they received. However, the study also found a lack of attention to day-to-day management in both academic and administrative affairs.

Conducting a follow-up review after 15 years allows the 1975 study findings to be used as a benchmark, and for VCCS progress in specific areas to be assessed. The results of the current study show that the VCCS has made significant progress in selected areas, and some progress with regard to all but one of the major 1975 findings. In particular, the VCCS has made great strides in improving geographic access for students, increasing instructional workload, improving system level planning, and developing comprehensive systemwide

The VCCS Has Made Significant Progress Since the 1975 JLARC Study

Key: ○ Significant Progress ◒ Some Progress ● No Progress NA - Not Applicable

Key Issue from 1975 Study	Progress Since 1975	Further Action Needed	Comments
Mission			
Need for minimum program admission guidelines	○	NO	
Need for improved geographic access	○	NO	Based on perceptions of current students regarding access to existing community college campuses or off-campus locations.
Resource Management			
Need for increased instructional workload	○	YES	Increases in student-to-faculty ratios and part-time faculty usage are causing concern within the VCCS.
Counseling services understaffed at some colleges	●	YES	Need to reassess the role of counselors at each community college.
Budget Operations			
Need for improved enrollment forecasting	NA	NO	Funding is now based on actual rather than projected enrollments.
Need for improved student classification	NA	NO	Funding is now discipline based rather than program based.
Curriculum Management			
Need for active enforcement of curriculum policies	◒	YES	
Need for improved program productivity	◒	YES	
Academic Staff			
Limited experience of counselors	○	NO	
Partnerships			
Need for articulation agreements with four-year schools	◒	YES	Requires active leadership from the State Council of Higher Education for Virginia.
Lack of policy supervision in division of industrial training	NA	NO	The division was transferred to the Department of Economic Development in 1985. JLARC did not review the division in the current study.
Unreliable and inaccurate reporting in special training	○	NO	
Planning and Management Information Systems			
Master planning deficient	○	YES	System planning satisfactory but college master plans for some colleges need improvement.
Institutional research and planning relationships not generally understood	◒	YES	
Need for increased management information	○	YES	

Source: JLARC staff analysis.

management information systems. Staff attitudes also remain positive, and students are very satisfied with the programs and services provided by the VCCS.

However, the VCCS has grown larger and more complex over the last 15 years. Today, the VCCS faces many new and more difficult challenges, and a number of improvements are necessary.

The need for effective management will intensify in the coming years. The foremost challenge for the VCCS in the 1990s is to reconcile expansion with limited resources. The VCCS has expanded its mission significantly over the years, and the system has worked diligently to meet this expanded mission. A wide variety of services are offered to more and more students. In addition, higher education enrollments are projected to grow in Virginia over the next 15 years, and the VCCS will be expected to serve a major proportion of these students.

As a result of expansion, there are indications of strain on the system. The VCCS must act to manage further growth within the limitations of available resources. Two major efforts are necessary to manage growth and help ensure educational quality. First, if current fiscal and enrollment trends continue, the VCCS should reassess its broad mission and prioritize among its many programs and services. This would ensure that adequate resources are available for the highest priority activities. Second, given conditions within the system now, specific controls should be instituted to manage enrollment. In the absence of sufficient resources to offer additional class sections, the system might have to turn away students rather than exceed its operational limits.

The VCCS must address additional operational problems as well. The curriculum must be managed better to make sure that all programs are productive, and that all credit courses are worthy of State funding. The VCCS must do its part, along with the State Council of Higher Education for Virginia (SCHEV) and the senior institutions, to create more systemwide articulation agreements with Virginia's senior institutions. The VCCS must focus its attention on a number of other concerns as well, including safeguarding its computing assets, reexamining certain aspects of the system office organization, and improving a variety of other operational functions.

This report summary briefly references major study findings and recommendations. Detailed explanations are contained in the text of the report.

The VCCS May Have to Reassess Its Expansive Mission

Over the years, the VCCS has expanded its programs and services beyond those specified in the *Code of Virginia*, and even beyond those listed in the VCCS mission statement. As a result of this expansion, there are growing indications of strain on the system. Full-time faculty workload has increased steadily in recent years even as more part-time faculty have been hired. At some colleges the majority of credit instruction is provided by part-time faculty. Counselor workload may also be a cause for concern. Facilities are beginning to age even as the VCCS serves record enrollments.

The Commission on the University of the 21st Century expects that enrollments in Virginia higher education will increase over the next 15 years. The community colleges, like Virginia's other higher education institutions, will be expected to play a role in serving these students. In the event of continued enrollment growth and State fiscal stress, it will be difficult for the VCCS to continue to provide all of the programs and services it currently offers. In this situation, the State Board will have to pri-

oritize among programs currently offered by the VCCS, emphasizing credit instruction over other programs and services.

As it charts the future course of the system, the State Board will need additional information in three areas. First, the appropriate role of the VCCS in adult literacy, General Educational Development, and Adult Basic Education programs should be established at the State level. Second, information on the cost and impact of inmate education programs should be acquired. Third, more information on the extent to which tuition is a barrier to enrollment is needed, as financial access is a fundamental component of the VCCS mission.

The following recommendations are made:

- In the event of continued enrollment growth without increased State resources, the State Board for Community Colleges should prioritize the program areas of the current mission. Within the broad priorities established by the State Board, individual colleges could be given flexibility to allocate resources to meet local needs.

- The Secretary of Education should develop a State policy on adult literacy, Adult Basic Education, and General Educational Development programs, defining the roles and responsibilities of various public education institutions.

- The VCCS, in conjunction with the Virginia Parole Board, the Department of Corrections, and the Department of Correctional Education, should conduct research on the cost and impact of inmate education provided by the VCCS.

- SCHEV and VCCS staff should examine the extent to which tuition may be a barrier to enrollment in community colleges and report the findings to the State Board for Community Colleges.

Management Controls Are Needed To Balance Available Resources With Enrollments

The VCCS has primarily used two staffing strategies to serve increasing numbers of students: increasing the numbers of students within classes, and hiring more part-time faculty to teach additional classes. Student-to-faculty ratios and part-time faculty usage have increased steadily over the last five years, to the point where VCCS administrators are becoming concerned about the continued quality of education in the VCCS. The VCCS should control these staffing trends before they reach critical levels. While tighter controls could mean limiting enrollments in some instances, this does not mean that the VCCS has to alter its open admissions policy. The community colleges can continue to serve a variety of students demonstrating an ability to benefit, but within established resource constraints.

The following recommendations are made:

- The VCCS should impose controls on college operations to keep student-to-faculty ratios and part-time faculty usage at acceptable levels. The controls should be decided within the VCCS, and should be based on considerations such as educational quality, availability of resources, and the needs of individual community colleges.

- The VCCS should establish a policy on the management of part-time fac-

ulty, including requirements for orientation, supervision, and evaluation of part-time faculty.

- The VCCS should continue to explore alternative strategies for instructional delivery, including developing additional regional programs which serve two or more service regions and continuing to develop alternative means of course delivery such as telecommunications and extended learning.

Counselor staffing also requires attention. The 1975 JLARC study found counseling services to be understaffed at a number of colleges, based on student-to-counselor ratios. Today, student-to-counselor ratios are significantly higher than in 1975. In addition, the roles and responsibilities of counselors differ from college to college, and there is a lack of comprehensive information on counselor workload within the system.

The following recommendation is made:

- The VCCS should conduct a study of its counseling services to determine the appropriate role and responsibilities of VCCS counselors, and implement appropriate counselor staffing guidelines for each college.

An additional resource concern is facilities. VCCS facilities are beginning to age, and VCCS administrators expect that the aging of facilities will require increasing amounts of funds for maintenance and upkeep. At the same time, there is a lack of sufficient information on the adequacy of VCCS facilities for current service levels. The VCCS has not updated its systemwide facilities master plan since 1967. Now is an appropriate time for the system to conduct a comprehensive facilities planning process.

The following recommendation is made:

- The VCCS should prepare a long-range facilities master plan. This plan should inventory current facilities, project major maintenance needs, and project the types of buildings that will be required to meet future needs. In the development of the plan, the VCCS should work with SCHEV to develop a consensus on projected space needs.

Certain Aspects of VCCS Budget Operations Should Be Improved

The VCCS is funded under the higher education operating budget guidelines maintained by SCHEV. The Appropriations Act specifies a college-by-college appropriation for the VCCS, along with a separate appropriation for the system office. However, the State Board has the authority to pool the appropriations and reallocate resources according to an internal model.

Four problems should be addressed in the area of budget operations. First, the college-by-college appropriation creates confusion and administrative burdens, as the colleges do not actually receive the amounts listed in the Appropriations Act. Second, State funding guidelines in the area of student services positions may be inequitable for the VCCS. Third, the VCCS internal allocation model is unnecessarily confusing. Fourth, some colleges are violating the intent of State Board policy against charging operating fees by requiring students to pay such fees directly to third party providers.

The following recommendations are made:

- The practice of separately listing appropriations for each college and the system office should be reviewed during the upcoming JLARC study of the State budget process.

- The State Council of Higher Education for Virginia should modify its higher education funding guidelines to address the VCCS' high proportion of part-time students.

- For future allocations, the VCCS should relabel and clearly identify the current equipment line item in its internal resource distribution as the balancing account.

- The State Board for Community Colleges should assess current practice with regard to student fees used to cover operating expenses, and revise its policy on student fees accordingly.

VCCS Enrollment Records Appear To Be Accurate

In Virginia higher education, the unit of service for funding purposes is the full-time-equivalent (FTE) student. For this reason, it is important for institutions to report accurate enrollment figures. An audit of VCCS enrollment records showed that the system does report its enrollment figures accurately. However, as college records become more automated, the VCCS will need improved controls to ensure that an audit trail is maintained.

The following recommendations are made:

- The VCCS should reexamine its record management policies to make sure that a complete audit trail is maintained for all student enrollment records.

- The VCCS should implement and enforce comprehensive policies and procedures for managing student records, particularly in an automated environment.

- The VCCS should continue to study the causes of enrollment fluctuation in order to improve planning information.

Curriculum Management Should Be Improved

The VCCS is organized as a single institution of higher education, yet the community colleges are diverse. While programs and courses may not be of the exact same nature at each of the colleges, certain curriculum controls should be in place. The VCCS has achieved commendable productivity in its associate degree programs. However, a number of certificate and diploma programs fail to meet minimal standards of productivity, and the VCCS lacks standards for evaluating whether courses are worthy of credit. Also, in some cases oversight of off-campus instruction has been inadequate.

The academic integrity of fractional credit courses is also questionable. There is evidence that if State funding were available for non-credit education, most or all fractional credit courses would be offered on a non-credit basis. This indicates that students may be receiving credit for courses which are essentially of a non-credit nature at State expense. Furthermore, fractional credit courses are intended solely for business, industry, and government training, but a number of colleges offer these courses to the general public in violation of State Board Policy.

The following recommendations are made:

- The VCCS should establish productivity standards for certain certificate and diploma programs, and centrally monitor the productivity of these programs on a regular basis.

- The VCCS should improve its oversight of courses by establishing standards for credit instruction, post-auditing non-traditional courses, and strictly enforcing the curriculum policies of the State Board.

- SCHEV, in cooperation with the VCCS, should conduct an evaluation of the fractional credit course policy of the VCCS, and report the results to the Secretary of Education. The evaluation should determine whether fractional credit courses are an acceptable vehicle for meeting the training needs of business, industry and government. If not, then alternative funding policies for funding short training courses should be examined.

- The VCCS should implement specific policies and procedures for the management of off-campus instruction.

System-Level Leadership Is Needed for Faculty Recruitment

Virginia's community colleges will be expected to meet the challenge of teaching in an increasingly technological society. A diverse and talented faculty will be needed to meet the challenge. Currently, a number of colleges are experiencing difficulty recruiting and retaining science and technology faculty. Also, like many higher education institutions across the nation, the VCCS needs more female and minority faculty.

The following recommendations are made:

- The VCCS Chancellor, in cooperation with the community college presidents, should study the full extent of the difficulties involved in recruiting science and technology faculty, project the system's need for science and technology faculty in the 21st century, and develop strategies for meeting those needs. Salary differentials for science and technology faculty should be among the strategies considered.

- The VCCS Chancellor should direct the college presidents to develop specific strategies for developing faculties which are representative of the racial and gender diversity of the community, in addition to their current practice of meeting hiring objectives under the Virginia Plan for Equal Opportunity in State-Supported Institutions of Higher Education.

Systemwide Articulation Agreements Should Be Developed with All Public Senior Institutions

The VCCS has developed a variety of productive partnerships with senior institutions, secondary schools, and the business community.

However, the VCCS has only been able to develop three systemwide articulation agreements with Virginia's public senior institutions, when agreements with all public senior institutions should be the goal. Active leadership by SCHEV will be needed to address this problem. For its part, the VCCS must continue to develop the quality and consistency of its general education programs.

The following recommendation is made:

- SCHEV should increase its efforts as a facilitator between the VCCS and Virginia's public senior institutions with the goal of establishing formal systemwide articulation agreements with all public senior institutions in Virginia.

Systemwide Planning Has Improved, But Some Colleges Need Further Progress

The VCCS has made excellent progress in systemwide planning, and is now completing a comprehensive long-range planning process. Each community college is also required to have its own master plan in place. Seven colleges were found to have planning deficiencies. Also, there is a need for systemwide planning guidelines which the colleges can strive to meet.

The following recommendations are made:

- All community colleges identified as having planning deficiencies at the time of this review should remedy these deficiencies during the next planning cycle.

- The VCCS should develop and disseminate community college planning guidelines and ensure that all colleges meet commonly accepted planning criteria.

Management Information Systems Are of High Quality, But Further Improvements Are Needed

The VCCS has made tremendous progress in developing systemwide management information systems (MIS) through its distributive computing network. However, there are five problem areas which require attention. First, while the network is a tremendous source of management data for colleges, not all colleges have the expertise to access and manipulate the data for local purposes. Second, the physical security of network computing assets is at risk at three sites, and there is no systemwide disaster recovery plan for the network.

Third, despite the number and complexity of network computing operations, there is no formal quality assurance function within the data services section. Fourth, the VCCS lacks a central source of information on program approval and productivity. Fifth, it is not clear who should support the growing number of microcomputer systems in the VCCS.

The following recommendations are made:

- The VCCS should improve the physical security of its network computing assets at the system office and at the eastern and central regional computing centers. Also, the VCCS should develop a disaster recovery plan for the systemwide computing network as soon as possible.

- The VCCS should: (1) improve the local MIS capability of colleges in need through targeted support from the system office and professional development programs, (2) create a formal quality assurance function within the data services section of the system office, (3) develop a systemwide application for managing academic program information, and (4) establish a strategy for the support of microcomputer technology within the VCCS.

The Overall System Is Organized Appropriately

The VCCS is organized as a single institution of higher education comprised of 23 different community colleges. This organizational structure generally works well, and there are many examples where the community colleges work cooperatively to achieve common goals. However, in one recent case a college operated an inmate education program in other colleges' service regions without coordinating efforts with the other college presidents and the system office.

The following recommendation is made:

- The VCCS should coordinate educational efforts which involve multiple community college service regions at the system level.

The Role of the System Office Should Be Clarified and Certain Functions Should Be Improved

The role of the VCCS system office should be to provide both monitoring and support related to the State Board, the Chancellor, and the colleges. However, there is confusion over whether system office staff should emphasize monitoring, support, or both in their daily operations. Also, support to the colleges might be improved in the areas of facilities and personnel. Finally, there is a need for more active oversight of local funds transactions.

The following recommendations are made:

- The VCCS Chancellor should clarify the role of the system office and disseminate this information throughout the system.

- The VCCS should consider allowing community colleges that are appropriately staffed to assume additional responsibilities in the areas of engineering and facilities construction and personnel.

- The State Board should require all community colleges to operate with a single chart of accounts to achieve systemwide unity in local fund reporting. Also, the State Board should require all community colleges to use the newly purchased automated accounting system when it becomes available.

At the time of the JLARC review, the system office was structured under two divisions — academic and student affairs and administrative and fiscal affairs. Under this arrangement, concerns were identified with the span of control of the Chancellor, and there appeared to be communication problems between the divisions' sections.

A new organizational structure was implemented by the new Chancellor on July 1, 1990. While this new configuration could help alleviate problems with span of control and communication, it is not yet clear how the functions of the vice chancellor positions for academic services and administrative services will relate to the functions of the line units. Over the short term, the Chancellor and the Executive Vice Chancellor will need to carefully monitor and assess activities in these areas to ensure that duplication does not develop. Eventually, these positions may need to be reconfigured.

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I. Introduction

The Virginia Community College System (VCCS) plays a unique role in Virginia higher education. The VCCS was specifically structured to be geographically and financially accessible to Virginia citizens desiring further education and skill development. In keeping with this commitment to access, the system operates with an open admissions policy.

Under the open admissions policy, adults with a high school diploma or the equivalent, who demonstrate the potential to benefit from a program, can be admitted to a community college. The student does not have to meet rigorous admissions standards. Developmental programs are offered to help students who are not prepared for regular college coursework. These programs allow the VCCS to serve a wide range of students with needs that may not be met by a traditional four-year institution of higher education.

To carry out its role, the VCCS is organized as a single institution comprised of 23 colleges with 34 campuses. The system serves more than 130,000 students per semester in credit courses, and many more in non-credit continuing education and community service courses. The system offers degree, diploma, and certificate programs in a number of college transfer and occupational technical fields. A variety of pre-collegiate, continuing education, and community service programs are also offered.

The VCCS has grown significantly since it was established in 1966. Starting with two colleges and an operating appropriation of $4.4 million, the system has expanded to include the 23 colleges with an annual operating appropriation of nearly $270 million.

This report is a follow-up to a previous Joint Legislative Audit and Review Commission (JLARC) study of the VCCS conducted in 1975. The current review reexamines the key findings from the earlier report and examines a number of new issues facing the VCCS today.

OVERVIEW OF THE VIRGINIA COMMUNITY COLLEGE SYSTEM

The VCCS was founded in 1966 for the purpose of broadening the base of higher education in Virginia, providing more Virginians with the opportunity to acquire post-secondary education. As a result, the current mission of the system is broad. Community colleges offer over 600 diploma, degree, and certificate programs in college transfer and occupational technical fields. The colleges also offer a variety of developmental, adult literacy, Adult Basic Education, and General Educational Development courses, inmate education programs, and continuing education and community service courses and activities.

As a single institution of higher education, the system is governed by the State Board for Community Colleges, and is administered by a Chancellor appointed by the State Board. The system office in Richmond provides centralized support to the State Board, the Chancellor, and the colleges. Each community college has its own president and a local college board.

The VCCS is the State's largest institution of higher education. In Fall 1989, 45 percent of all students enrolled in Virginia's State-supported higher education institutions attended community colleges. Students attending community colleges tend to be older and are more often attending classes part-time.

The VCCS receives the majority of its resources from the State general fund. Although the Appropriations Act specifies a college-by-college appropriation of funds and positions, the VCCS pools these resources and reallocates them among the colleges using an internal allocation model. The VCCS system office is responsible for monitoring college expenditures to ensure that the system as a whole operates within its position and funding limits. Personnel resources for the VCCS include nearly 6,000 full-time and part-time faculty members and 170 counselors.

History

In the early 1960s, Virginia policymakers began to sense that the Commonwealth's higher education resources were insufficient. Since World War II, access to higher education had increased nationwide, largely because of the G.I. Bill. By the mid-1960s, the first wave of post-war "baby boomers" was approaching college age. Industrial development was emerging as a statewide priority at the same time.

In 1963, the Commission on Vocational and Technical Education, also known as the Slaughter Commission, recommended a statewide system of technical colleges. The commission also recommended a feasibility study of a system of comprehensive community colleges for Virginia. In 1964, the General Assembly created a Technical College System in statute. That same year, the General Assembly also created a Higher Education Study Commission, known as the Bird Commission. In 1965, the Bird Commission recommended the development of a system of comprehensive community colleges to include the technical colleges, two-year branches of senior institutions, and post-secondary vocational schools. The new system was established in 1966 (Chapter 16, *Code of Virginia*) and placed under the authority of a State Board for Community Colleges.

The State Board, as one of its first actions, commissioned a consultant to develop A Proposed Master Plan for a Statewide System of Community College Education in Virginia. Recommending that a college campus be within commuting distance of every citizen, the plan divided the entire state into 22 college regions, each to be served by a community college. Today the VCCS has 23 regions, the only adjustment being that the original plan defined the areas now served by Danville and Patrick Henry community colleges as one region. The first two community colleges,

Northern Virginia and Virginia Western, were established in 1966. By 1973, all 23 community colleges were in place (Figure 1). A number of these institutions were formerly branch colleges of senior institutions or area vocational technical schools.

Mission

The VCCS sees its mission as providing all individuals throughout Virginia a continuing opportunity for the development and extension of their skills and knowledge. This opportunity is to be provided through programs and services that are financially and geographically accessible. Through the colleges, the VCCS attempts to address both the needs of individual citizens and the economic needs of college communities.

The VCCS offers programs in five areas: college transfer, occupational technical, pre-collegiate, continuing education, and community service. The system offers associate degree programs in the college transfer area to prepare individuals for transfer to senior institutions as upper division students. In the occupational-technical area, associate degrees, diplomas, and certificates are offered to prepare individuals for careers as technical and paraprofessional workers.

Any individuals who wish to continue their learning experiences may take community college continuing education courses without having to be admitted to a program. Continuing education courses may be offered for degree credit or continuing education units. The colleges offer community services to provide additional cultural and educational experiences for the community. Community service programs may range from art exhibits to non-credit classes in topics such as baking, gardening, and dancing.

Some colleges also offer other distinctive programs and services. For example, several colleges offer pre-collegiate programs such as Adult Basic Education and literacy training which serve students functioning below the level of high school completion. Thirteen colleges provide inmate education programs in correctional institutions. Nine colleges participate in the Center for Innovative Technology's (CIT) Technology Transfer Program. CIT agents based at the colleges help businesses and industries incorporate technology into their operations. In some instances, community college faculty are called upon to provide assistance.

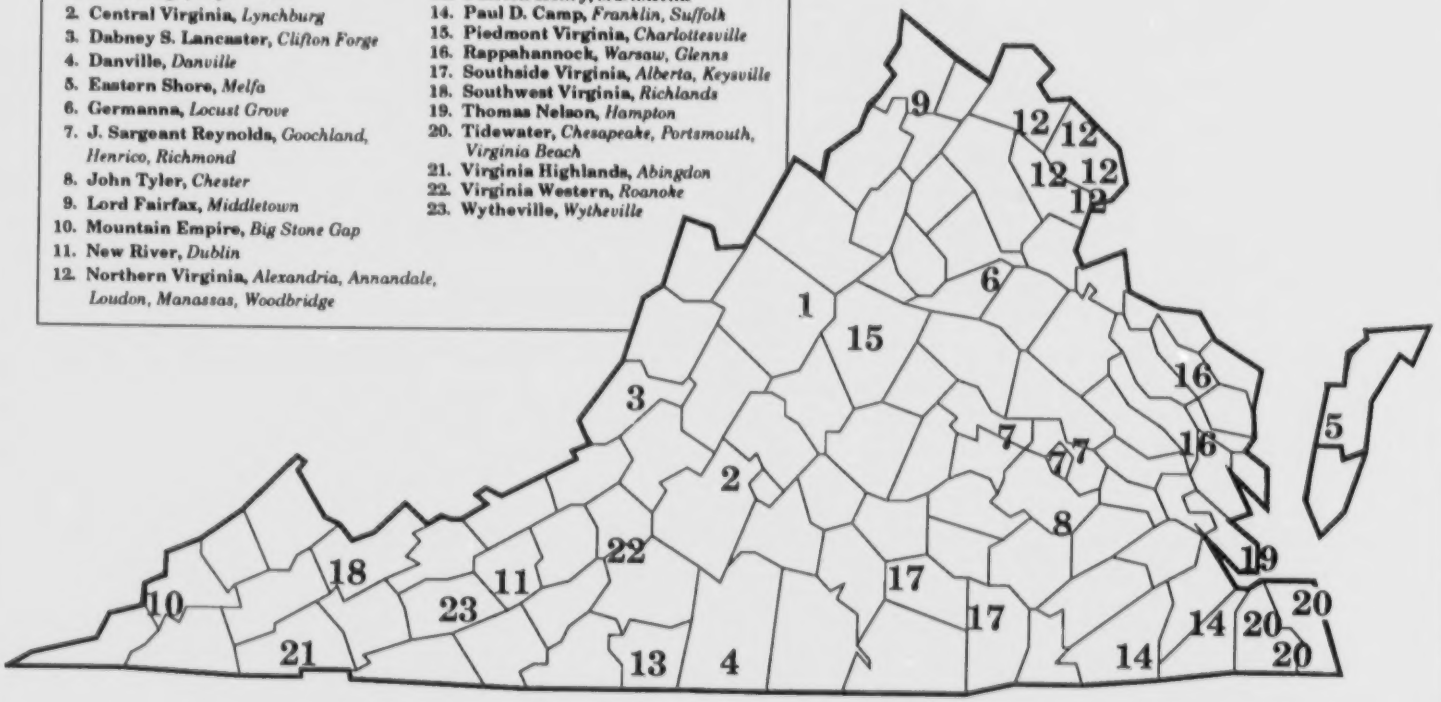
The VCCS essentially operates under an open admissions policy. Any adult with a high school diploma or the equivalent who demonstrates the potential to benefit from a program can be admitted to a community college. In practice, while individuals meeting these criteria can take courses at community colleges, they are not necessarily admitted to a specific curriculum. New applicants are assessed and may be required to take developmental coursework prior to admission to a curriculum. In addition, popular programs at some colleges have waiting lists.

Figure 1

Community Colleges in Virginia

Key to Community Colleges

1. **Blue Ridge,** *Weyer's Cave*
2. **Central Virginia,** *Lynchburg*
3. **Dabney S. Lancaster,** *Clifton Forge*
4. **Danville,** *Danville*
5. **Eastern Shore,** *Melfa*
6. **Germanna,** *Locust Grove*
7. **J. Sargeant Reynolds,** *Goochland, Henrico, Richmond*
8. **John Tyler,** *Chester*
9. **Lord Fairfax,** *Middletown*
10. **Mountain Empire,** *Big Stone Gap*
11. **New River,** *Dublin*
12. **Northern Virginia,** *Alexandria, Annandale, Loudon, Manassas, Woodbridge*
13. **Patrick Henry,** *Martinsville*
14. **Paul D. Camp,** *Franklin, Suffolk*
15. **Piedmont Virginia,** *Charlottesville*
16. **Rappahannock,** *Warsaw, Glenns*
17. **Southside Virginia,** *Alberta, Keysville*
18. **Southwest Virginia,** *Richlands*
19. **Thomas Nelson,** *Hampton*
20. **Tidewater,** *Chesapeake, Portsmouth, Virginia Beach*
21. **Virginia Highlands,** *Abingdon*
22. **Virginia Western,** *Roanoke*
23. **Wytheville,** *Wytheville*



Source: Fact Book 1988-89: Higher Education in Virginia.

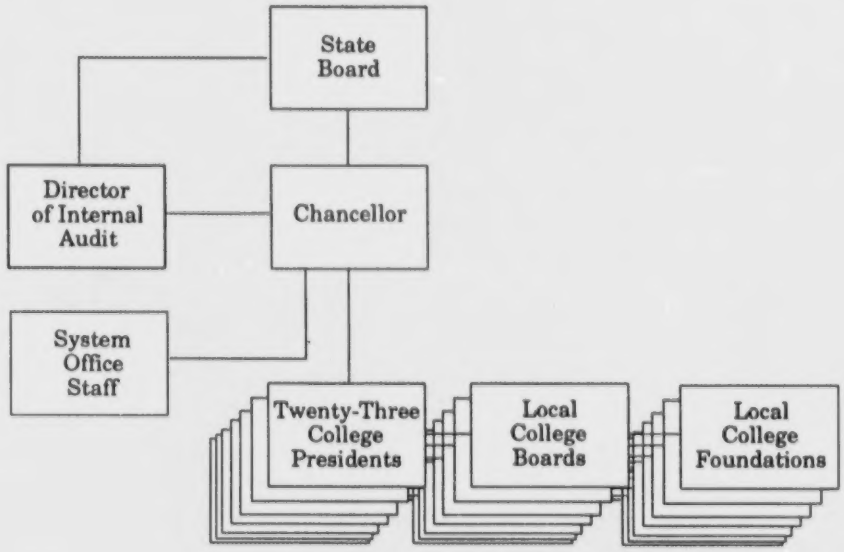
Organization

The VCCS is an unusual organization because it is one institution with 23 different colleges (Figure 2). The State Board is responsible for statewide planning and oversight. The system is administered by a Chancellor with support from the system office. The college presidents are responsible for managing individual colleges. Local boards serve as liaisons with the local community and help identify local needs. Twenty-two of the 23 colleges have active foundations, which provide financial support for the college through private funding.

State Board for Community Colleges. The 1966 enabling legislation for the VCCS gave the authority to establish, control, and administer the system to a State Board for Community Colleges. The 1977 General Assembly further clarified the role and status of the State Board as a governing board of a statewide institution of higher education. The State Board consists of 15 members appointed by the Governor, subject to confirmation by the General Assembly.

Figure 2

Organization of the Virginia Community College System



Source: JLARC Staff graphic based on VCCS *Policy Manual*.

Chancellor. The Chancellor is appointed by the State Board, and is the chief executive officer of the system. According to statute, the State Board prescribes the duties of the Chancellor. These duties are described in general terms in the VCCS Policy Manual. The VCCS has a new Chancellor who took office on May 1, 1990.

The Chancellor is responsible for establishing policies and procedures necessary for proper performance of the system. All college presidents report to the Chancellor, and the Chancellor evaluates the presidents. The Chancellor has the authority to make management adjustments to the distribution of funding to each college.

System Office. The central office of the VCCS is known as the system office. The system office was established to provide staff support for the State Board and the Chancellor, and to provide functional support for the community colleges. Seven sections report to an Executive Vice Chancellor, who in turn reports to the Chancellor. These sections include budget, finance, human resources and affirmative action, facilities planning and engineering, data services, instructional programs and student services, and research and planning. An internal audit section reports directly to the State Board. The system office currently operates with 105 positions.

College Presidents. The president is the chief administrative officer of the community college. The president is appointed by the Chancellor after a review process involving the State Board, the system office, the local board, and college representatives. The president is responsible to the Chancellor for the operation of the community college and is responsible to the local board in those areas of local board authority.

Local College Boards. Each community college has its own local board. Local boards consist of a minimum of nine members appointed by the local political subdivisions served by the community college. The local boards act in an advisory capacity to the State Board and perform duties as delegated by the State Board. Key powers of the local boards include management of local funds budgets and advising the Chancellor and the State Board in the selection, evaluation, and removal of presidents.

Local College Foundations. In 1969, the Community College of Virginia Educational Foundation was established to receive all gifts, grants, or donations from non-public funds for the VCCS or for individual colleges. Today, all but one of the community colleges have their own active foundations. Foundations are separately incorporated, non-profit entities. College foundations raise funds for student scholarships, staff development for faculty, construction and renovation, and other college activities.

Enrollments Trends

With a few exceptions, VCCS enrollments have increased steadily since the system's inception (Table 1). The VCCS experienced a sharp unexpected increase in

Table 1

VCCS Annual Full-Time-Equivalent Student Enrollment 1966-67 through 1989-90 Academic Years

Academic Year	FTE Student Enrollment	Change	
		Number	Percent
1966-67	2,092	—	—
1967-68	7,174	5,082	242.9%
1968-69	12,120	4,946	68.9
1969-70	15,717	3,597	29.7
1970-71	20,383	4,666	29.7
1971-72	25,066	4,683	23.0
1972-73	29,133	4,067	16.2
1973-74	34,784	5,651	19.4
1974-75	42,586	7,802	22.4
1975-76	52,653	10,067	23.6
1976-77	50,798	-1,855	-3.5
1977-78	52,323	1,525	3.0
1978-79	52,877	554	1.1
1979-80	55,360	2,483	4.7
1980-81	59,144	3,784	6.8
1981-82	61,428	2,284	3.9
1982-83	59,295	-2,133	-3.5
1983-84	57,492	-1,803	-3.0
1984-85	52,532	-4,960	-8.6
1985-86	51,380	-1,152	-2.2
1986-87	54,928	3,548	6.9
1987-88	58,310	3,382	6.2
1988-89	61,965	3,655	6.3
1989-90	69,513	7,548	12.2

Source: VCCS and State Council of Higher Education for Virginia (SCHEV) enrollment data.

fall semester 1989 when enrollments jumped by more than 12 percent. The individual colleges vary widely in enrollments. For example, Northern Virginia Community College enrolls more than 60 times as many full-time-equivalent (FTE) students as Eastern Shore (Table 2).

Table 2

Community College Enrollment
1989-90 Academic Year and Fall Term 1989

College	1989-90 FTE Students	Fall 1989 Headcount		
		Full-time	Part-time	Total
Northern Virginia	20,100	8,746	25,793	34,539
Tidewater	10,705	4,511	13,838	18,349
J. Sargeant Reynolds	5,079	2,536	8,454	10,980
Thomas Nelson	3,820	1,665	5,643	7,308
Virginia Western	3,363	1,658	5,000	6,658
Southwest Virginia	2,679	1,571	4,306	5,877
New River	2,300	1,485	2,134	3,619
John Tyler	2,238	884	4,206	5,090
Central Virginia	2,099	995	3,127	4,121
Piedmont Virginia	1,950	836	3,409	4,245
Danville	1,840	1,022	2,033	3,055
Southside Virginia	1,525	815	1,756	2,571
Mountain Empire	1,512	1,023	1,851	2,874
Wytheville	1,396	834	1,213	2,047
Virginia Highlands	1,352	925	1,255	2,180
Lord Fairfax	1,334	701	2,023	2,724
Blue Ridge	1,284	704	1,810	2,514
Germanna	1,204	649	1,748	2,397
Patrick Henry	1,088	569	1,402	1,971
Dabney S. Lancaster	920	584	864	1,448
Rappahannock	800	331	1,535	1,866
Paul D. Camp	636	235	1,037	1,272
Eastern Shore	289	187	303	490
CCS	69,513	33,456	94,739	128,195

Note: Headcount figures are shown as of the middle of the term and do not include some later enrollments. FTE figures are estimates, but final figures are not expected to change appreciably.

Source: VCCS and SCHEV enrollment data.

Some of the general characteristics of the VCCS student body have changed since the time of the first JLARC study in 1975. A larger proportion of the student body is female today — 57 percent compared to 47 percent in 1974. The proportion of minority students in the VCCS is also greater today. In 1974, 88 percent of these

students were white, and 12 percent were of other races. Today, 82 percent of VCCS students are white, 12 percent are black, and four percent are of races such as Asian and Pacific Islander, American Indian, Alaska native, and others.

Although exactly comparable data are not available, the VCCS continues to serve a large proportion of non-traditional students, as it did in 1974. VCCS students are often older than traditional higher education students who enter higher education full-time on completion of high school. Today, 68 percent of VCCS students are older than 21 years of age. In 1975, 63 percent of students surveyed were over 22 years old.

A larger proportion of VCCS students attend part-time today as compared to 1974. VCCS students are commuters, many of whom have families or jobs which only allow them to attend part-time. Approximately 26 percent of students attend full-time, while 74 percent attend part-time (Table 2). This represents a significant change from 1974, when VCCS students were evenly split between part-time and full-time status. In 1974, 72 percent of students were employed, while 76 percent of today's students hold jobs.

The majority of VCCS students enrolled in a program in 1989 are seeking associate degrees in college transfer or occupational fields (Table 3). However, more than 40 percent of students have no declared major. Approximately eight percent of students seek diploma and certificate awards, and about three percent of students are enrolled in developmental coursework at community colleges.

Resources

The VCCS receives funding from a variety of sources including the State general fund, tuition and fees, local governments, grants, gifts, contracts, and other sources (Table 4). The largest proportion of operating revenues comes from the State general fund. The VCCS received more of its revenues from State funds and less from localities than most other states, based on the most recent available information from FY 1986 (Appendix A).

The VCCS was appropriated $269,781,269 in State operating funds and authorized 6,223 positions for FY 1990 (Table 5). Although the Appropriations Act specifies a college-by-college appropriation of funds and positions, the VCCS pools these resources and allocates them among the colleges using funding guidelines based on an internal allocation model. Budget and finance staff at the VCCS system office are responsible for monitoring college expenditures to ensure that the system as a whole stays within its position and funding limits. The largest expenditure category is instruction, followed by institutional support and academic support (Table 6).

The primary service providers in the VCCS are instructional faculty and counselors. The VCCS employs more than 1,900 full-time instructional faculty and more than 3,900 part-time instructors. Most full-time instructional faculty hold at least master's degrees. The system employs 170 counselors, most of whom also hold a

Table 3

Headcount Student Enrollment by Type of Award
Fall Semester 1989

College	Transfer Degree	Occupational Degree	Diploma/ Certificate	Developmental Studies	Unclassified	Total
Blue Ridge	514	510	100	0	1,390	2,514
Central Virginia	578	730	357	705	1,751	4,121
Dabney S. Lancaster	186	284	132	265	581	1,448
Danville	284	347	489	386	1,549	3,055
Eastern Shore	75	82	46	98	189	490
Germanna	533	636	31	0	1,197	2,397
J. S. Reynolds	506	1,501	1,319	1,050	6,604	10,980
John Tyler	384	987	143	135	3,441	5,090
Lord Fairfax	667	541	131	0	1,385	2,724
Mountain Empire	724	671	409	18	1,052	2,874
New River	627	1,020	399	0	1,573	3,619
Northern Virginia	11,756	8,654	834	547	12,748	34,539
Patrick Henry	453	574	311	0	633	1,971
Paul D. Camp	419	258	187	0	408	1,272
Piedmont Virginia	1,434	651	53	30	2,077	4,245
Rappahannock	334	371	219	0	942	1,866
Southside Virginia	445	505	337	0	1,284	2,571
Southwest Virginia	1,108	1,413	2,180	0	1,176	5,877
Thomas Nelson	2,467	2,435	444	0	1,962	7,308
Tidewater	3,391	5,497	1,021	2	6,638	18,349
Virginia Highlands	325	821	180	51	803	2,180
Virginia Western	2,238	1,545	373	0	2,502	6,658
Wytheville	189	611	77	340	830	2,047
VCCS	31,437	30,644	9,772	3,627	52,715	128,195

Source: VCCS enrollment data.

Table 4

Sources of Community College Operating Funds FY 1989

Source	$/FTES	Percent of Total Funding	Aggregate Dollars
State General Fund	$2,903	64.2%	$179,869,439
Tuition and Fees	965	21.4	59,778,496
Federal Grants and Contracts	442	9.8	27,365,405
Local Funds	13	0.3	799,082
Other*	195	4.3	12,097,121
Total	$4,517**	100.0%	$279,909,543

* Includes gifts, contracts, non-federal grants, auxiliary enterprises, and other sources of revenue.

** Total dollars per FTE appropriation does not equal the sum of individual categories due to rounding.

Source: JLARC analysis of VCCS financial statements, FY 1989.

Table 5

State Appropriations to the VCCS FY 1985 through FY 1990

Fiscal Year	Maximum Employment Level	Operating Appropriations	Capital Outlay	
			Reappropriations	Appropriations
1985	6,095	$186,791,535	$7,160,120	$26,053,760
1986	5,929	194,174,585		
1987	5,873	213,098,480	25,754,535	20,106,910
1988	5,934	222,511,785		
1989	6,188	258,089,460		24,129,104
1990	6,223	269,781,269		

Notes: Maximum Employment Level and Operating Appropriations figures reflect adjustments made in odd-year sessions.

Capital outlay figures reflect reappropriations and appropriations for the biennium. Reappropriations are unexpended appropriation balances at the close of the previous biennium, as shown by the records of the Department of Accounts.

Source: Appropriations Acts 1984 - 1990.

Table 6

VCCS Current Fund Expenditures FY 1989

Category	$/FTES	Percent of Total Funding	Aggregate Dollars
Instruction	$2,148	47.7%	$133,096,479
Public Service	20	0.4	1,259,003
Academic Support	458	10.2	28,387,188
Student Services	341	7.6	21,147,233
Institutional Support	787	17.5	48,744,636
Plant Operation and Maintenance	310	6.9	19,229,046
Scholarships and Fellowships	314	7.0	19,458,311
Auxiliary Enterprise and Transfers	120	2.7	7,438,740
VCCS	$4,499*	100.0%	$278,760,636

Note: Current fund expenditures include spending from State, federal, local, and other sources of funds.

*Total differs from sum of the categories due to rounding.

Source: JLARC analysis of VCCS financial statements, FY 1989.

master's degree. Unlike their counterparts in most senior institutions, VCCS instructional faculty are not required to do research. Also, the VCCS does not award tenure to instructional faculty, although they do award multi-year contracts.

The VCCS owns 4,159 acres of land on 35 sites. According to the most recent available data, in 1988 there were 130 major academic and 180 temporary and support buildings owned by the system, with an insured value in excess of $309,000,000 and 4.3 million square feet of space. As a system, the facilities of the VCCS are beginning to age. Of the 130 major academic buildings, 24 percent are more than 20 years old, and more than half are over 15 years old.

JLARC REVIEW

Senate Joint Resolution Number 18 of the 1988 Session of the General Assembly identified higher education as the next functional area of State government to be

reviewed by JLARC. The 1989 General Assembly, in Senate Joint Resolution Number 135, further specified four topics to be studied during JLARC's review of higher education (Appendix B). These topics are:

- the Virginia Community College System
- relationships between secondary schools and institutions of higher education
- capital outlay, land, and maintenance
- the State Council of Higher Education for Virginia (SCHEV).

The Virginia Community College System is the first study completed under Senate Joint Resolution Number 135.

Consistent with the organizational structure of the system, the VCCS was generally reviewed as a single institution of higher education. Some issues, such as college planning, required analysis at the individual community college level. In these instances, findings are reported at the community college level as well as at the system level. A total of 14 major issues were reviewed during this study. Nine major research methods were employed to address the issues.

Issues

The JLARC study of the VCCS was designed broadly to ensure that two major concerns were reviewed: (1) VCCS progress in correcting deficiencies identified in the 1975 JLARC report, and (2) current VCCS operations. Study issues were grouped under seven general topics, and include:

- Mission:
  - — Is the mission of the VCCS appropriate?
  - — Is the mission of the VCCS being met now?
- Resource Management:
  - — Does the VCCS manage its financial, human, and facilities resources efficiently and effectively?
- Budget and Finance Operations:
  - — Do current funding procedures promote rational planning and equitable funding in the VCCS?
  - — Are VCCS enrollment figures reliable and valid?
- Academic Management:
  - — Are curriculum offerings adequately monitored and controlled?
  - — Are effective personnel management systems in place for academic staff?

— Has the VCCS made progress in developing effective partnership agreements?

- Planning and Management Information Systems:
  — Has planning been sufficiently improved in response to JLARC recommendations?
  — Has the VCCS developed quality management information systems?

- System Organization:
  — Is the VCCS organized appropriately?
  — Are the roles and responsibilities of system entities appropriate?

- System Office:
  — Are system office monitoring operations effective?
  — Does the system office provide adequate support to the colleges, the Chancellor, and the State Board?

Research Activities

Nine major research activities were undertaken during this study to collect and analyze data. These activities include: site visits to community colleges; an enrollment audit at each college; structured interviews; reviews of secondary data and documents; mail surveys of college administrators, faculty, and counselors; and telephone surveys of community college students and special training clients. Results of the various surveys are referenced frequently throughout this report. Survey responses supporting these references are shown in Appendix C.

Site Visits. JLARC staff made site visits to all 23 community colleges and their 34 campuses. Some colleges were visited more than once. At each college, separate structured interviews were conducted with the community college president, with the academic and finance deans, and where applicable, with regional computer network directors and technology transfer directors.

In addition, JLARC staff toured facilities on each campus. A facilities checklist was used to evaluate the condition, maintenance, and capacity levels of buildings, equipment, parking lots, and other community college facilities.

Enrollment Audit. JLARC staff also conducted an enrollment audit of each college. The objective of the audit was to determine whether the colleges were reporting enrollment figures accurately. Automated records for over 126,000 students from spring semester of 1989 were examined to identify student groups vulnerable to enrollment record keeping problems. These student groups included off-campus registrants, students who had not received grades by the end of the semester, out-of-State special arrangement contract students, and students auditing or withdrawing from classes. Samples from these groups, and a random sample of all other student records, were selected for further examination. A total of 2,329 records were examined.

For this sample of records, computer data reported as official enrollments for funding purposes were checked against college hard copy records. This review included examinations of student registration permit cards, requests for changes in registrations, faculty grade rolls, and other documentation associated with exceptional cases. In addition, structured interviews were conducted with college personnel involved in the enrollment reporting process at each of the 23 community colleges.

Structured Interviews. In addition to structured interviews conducted during college site visits, JLARC staff conducted structured interviews with VCCS representatives and other State officials. Each interview was administered using a predesigned instrument, and responses provided a variety of perspectives on the VCCS. Interviews were conducted with the Chairman of the State Board, the former and current chancellors, selected system office officials, the former Secretary of Education, and representatives of other State organizations. These organizations included SCHEV, the Department of Planning and Budget, the Department of Economic Development, the Department of Education, and legislative committee staffs.

Secondary Data and Document Reviews. A wide variety of both secondary data and documents were used for the study. Secondary data from VCCS computer applications were used extensively. Among the data bases accessed were the Virginia Personnel Management Information System, the VCCS student information system, and the VCCS internal accounting system. The data were used for such purposes as selecting survey samples, developing profiles of faculty and counselors, analyzing student enrollment trends, and analyzing VCCS budget activities.

A partial listing of documents reviewed by JLARC staff includes individual community college plans, catalogs, course schedules, the VCCS Policy Manual and Curriculum Guide, reports produced by the State Council of Higher Education for Virginia, accreditation guidelines published by the Southern Association of Colleges and Schools, and general literature on higher education missions, planning, and finance. System office documentation on program approval was also examined. Document reviews also provided important information for the assessment of curriculum management and planning.

Survey of Community Colleges. Five separate surveys were utilized to collect information during the study. The first survey effort was a two-part mail survey of the 23 community colleges. Part one of the survey requested data related to certificate and diploma program enrollments, and programs and activities in the areas of special training, continuing education, pre-collegiate, inmate education, and community service. Part one also requested a number of documents including college catalogs, course schedules, and master plans. Part two of the survey was designed to obtain each college's position on major issues. Questions concerning mission, planning, system resources, and curriculum and personnel management were among those included on the survey. All colleges responded to the survey.

Survey of Faculty. Community college faculty members were surveyed by mail. Four hundred and eighty full-time faculty members were selected by stratified

random sample. Twenty faculty members were selected from each of 22 colleges, and 40 were selected from Northern Virginia Community College because of its size. Of these 480, 361 (75 percent) of the faculty members responded. Faculty were asked about their activities, college personnel practices, curriculum management, facilities, staff development, and general satisfaction with their workload, compensation, and management.

Survey of Counselors. JLARC staff also surveyed community college counselors. All 170 full-time counselors employed by the colleges were mailed a survey. Of these, 122 (72 percent) of the counselors responded. Questions included on the counselor survey were similar to those asked of faculty.

Survey of Students. To collect information concerning student satisfaction with community colleges, a telephone survey of students was conducted. A random sample of 2,070 students — 90 from each college — was drawn. JLARC staff contracted with the Virginia Commonwealth University Survey Research Laboratory to administer the survey. Surveys were completed with 730 students, at least 30 from each college. Survey questions were designed to determine student satisfaction with teaching, counseling, facilities, and tuition costs.

Survey of Special Training Clients. The final survey effort was a telephone survey of special training clients. These clients included businesses, military units, hospitals, local governments, and public school divisions. A random sample of 112 special training clients from the 1988-89 academic year was selected. Of these, 78 (70 percent) of the clients responded with usable information. Clients were asked about their satisfaction with the training provided by the colleges. In addition, the survey responses were used to verify data on special training activities submitted by each college.

REPORT ORGANIZATION

The remaining chapters in the report review the issues examined in the study. Chapter II discusses issues related to the mission of the VCCS. Chapter III examines funding and budget considerations. Curriculum oversight and management are reviewed in Chapter IV. Chapter V discusses academic staff including faculty and counselors. A review of the current status of partnerships with senior institutions, secondary schools, and the business community is provided in Chapter VI. Chapter VII examines planning and the status of VCCS management information systems. The organization of the system and the system office are discussed in Chapter VIII. A Technical Appendix, containing detailed information related to analyses conducted during the study, is available for inspection in the JLARC offices. Appendix references in the text of this report refer to the Technical Appendix.

II. Mission of the Virginia Community College System

Through the years, the State Board for Community Colleges has expanded the mission of the Virginia Community College System (VCCS) beyond the original definition in its 1966 enabling legislation. The expansion appears to have been consistent with nationwide themes of community college mission and with legislative intent not explicit in the *Code of Virginia*. In addition, the State Board's actions provided the system with a clear statement of mission that appears to have been appropriate for the needs of the individual community colleges.

Community colleges have met this broad mission by emphasizing access and offering a comprehensive and diverse set of programs and services. The 1975 JLARC review concluded that lack of geographic access for students was a concern, but did not find financial access limited. Since then, geographic access for students has improved. Also, for most Virginians, community colleges remain financially accessible. As a result, the community college system is serving increasingly more students each year through a broad range of courses and services.

In pursuit of its mission, the VCCS has managed its resources efficiently. Today, however, there are growing indications of strain on the system, as staff and facility resources are stretched due to record enrollments. As a result, system administrators are becoming concerned about the continued quality of education in the system. While there is no definitive evidence that educational quality has been diminished because of growth, the VCCS should control the increasing workload of instructional and counseling staff before it reaches critical levels. The system should also develop a plan to meet its facilities needs for the coming decade.

In the future, community colleges will face even more challenges. Enrollments are projected to continue increasing. The community colleges will be expected to play a greater role in college transfer and in training Virginia's workforce. If current trends in enrollments and resources continue, better resource management alone may not enable the system to meet its challenges. Rather than trying to meet every need, the system will have to direct resources toward meeting its highest priority needs first, maintaining a high level of quality and access in those areas. To accomplish this, the State Board will have to prioritize the program areas of the system's current mission.

EXPANSION OF THE COMMUNITY COLLEGE MISSION

A comprehensive community college as defined in the *Code of Virginia* should provide instruction in one or more of these fields: college transfer, occupational technical, and adult continuing education. While the *Code of Virginia* does not specify

an open admissions policy, low tuition charges, or the need for each college to serve its own community, these were national themes for community colleges when the VCCS was founded. Also, examinations of interviews with the former governors and legislators who were instrumental in the system's founding show their intent was closer to the national themes than is evident from the *Code of Virginia*. However, it is not clear whether early policy makers envisioned the breadth of today's community college services.

Indeed, when the State Board determined its own definition of a community college and its first mission statement, these national themes were adopted. With subsequent changes in the mission, sometimes with support from the Virginia General Assembly, the State Board has expanded the role of Virginia's community colleges well beyond the original statutory definition. This expansion has been appropriate for the individual needs of the community colleges as they have tried to provide a variety of services to their local citizens.

Statutory Definition of a Comprehensive Community College

The 1966 legislation establishing the VCCS does not explicitly set out the mission or the role of the community colleges. It does, however, call for the establishment of a system of comprehensive community colleges, and includes the following definition of a comprehensive community college in Section 23-214 of the *Code of Virginia*:

> ....an institution of higher education offering instruction in one or more of the following fields:
>
> (1) freshman and sophomore courses in arts and sciences acceptable for transfer in baccalaureate degree programs,
>
> (2) diversified technical curricula including programs leading to the associate degree,
>
> (3) vocational and technical education leading directly to employment,
>
> (4) courses in general and continuing education for adults in the above fields.

This definition establishes college transfer, occupational technical, and continuing education programs as basic to the intended mission for the VCCS.

State Board Definition and Mission Statements

Enabling legislation left the "establishment, control and administration" of the VCCS to a State Board for Community Colleges. The *Code of Virginia* left

flexibility for the State Board to react to changing needs. As part of its responsibilities, the State Board adopted its own definition of a comprehensive community college and approved the first mission statement of the VCCS, modifying it over time in response to the changing needs of the State. These actions have expanded the role of the colleges beyond the *Code of Virginia* in two major areas: community services and developmental education. The State Board also specifically emphasized meeting State and local economic development needs and added geographic and financial accessibility as specific components of the VCCS mission (Exhibit 1).

The expansion of the mission was in keeping with national themes of community college establishment and with legislative intent behind the enabling legislation for the system. The Virginia General Assembly has commended the system, in the form of resolutions, for its expanded services in some areas.

The mission of the community college system is clearly differentiated from that of Virginia's other educational institutions, providing the community colleges with a unique niche in higher education. Each of the 23 colleges, according to their responses to the JLARC survey of colleges, found the current mission statement of the VCCS appropriate for the needs of their individual colleges.

Exibit 1

Mission of the Virginia Community College System

The Virginia Community College System functions within the educational community to assure that all individuals in the diverse regions of the Commonwealth of Virginia are given a continuing opportunity for the development and extension of their skills and knowledge through quality programs and services that are financially and geographically accessible.

The Virginia Community College System, through comprehensive community colleges, provides leadership in determining and addressing both the needs of individuals and the economic needs of the colleges' service areas.

Occupational-technical education, transfer education, developmental studies, continuing education, and community services are the primary avenues through which the mission is fulfilled. To assure that all students have the opportunity for success, each college shall provide a comprehensive program of student development services.

Source: Toward the Year 2000.

MEETING THE EXPANDED MISSION

The community colleges are meeting their expanded roles with a comprehensive set of programs and services. The VCCS offers comprehensive programs and services in the five areas of its current mission statement: transfer education, occupational technical education, developmental education, continuing education, and community service. In addition, the colleges are active in adult literacy, Adult Basic Education (ABE), and General Educational Development (GED) programs and prison education efforts. Across the system, over 130,000 students were served through more than 600 credit programs in Fall 1989.

It is not clear what the role of the community colleges should be in the delivery of pre-collegiate services, for instance adult literacy. The roles of Virginia's secondary schools and community colleges should be clearly defined to avoid duplication. Also, the specific benefits of prison education efforts by the community colleges have not been assessed. Given increasing community college involvement in this area, data needs to be collected on the effectiveness of community college programs held in correctional facilities.

Contributing to expanded enrollments within the system are two other important aspects of the VCCS mission — geographic and financial access for students. The system has made progress toward its mission of geographic access, a concern from the 1975 JLARC study. Additional campuses have been added, improving access in the affected geographic areas. A sharp increase in off-campus instruction has also enabled the colleges to extend educational opportunities to local communities. In addition, strides have been made since the 1975 JLARC review in transportation services provided by local governments and the colleges themselves.

The degree of progress in providing financial access to the system is less clear. For the majority of Virginians, there is evidence that tuition is reasonable. Community college tuition is significantly lower than that of Virginia's senior institutions of higher education. Financial aid programs are available for low-income students, improving access for these students. However, Virginia's tuition is expensive when compared to community colleges in other states, and some students who were surveyed say they are taking fewer courses than they want to due to cost. The extent to which tuition could be preventing students from enrolling has not been definitively examined.

Programs and Services

In the 1989 JLARC survey of colleges, all 23 colleges reported offering college transfer, occupational technical, developmental, credit continuing education, and community service programs and activities. In addition to these program areas in the current mission, some colleges are also active in adult literacy, ABE, and GED

programs, and these efforts are increasing. For the system as a whole, enrollments in college transfer programs have been increasing, while enrollments in occupational technical programs are declining and enrollments in developmental programs have remained steady. College involvement in inmate education programs is increasing.

College Transfer Programs. College transfer programs cover such topics as business administration, computer science, education, and fine arts. The college transfer area of the mission is growing in both numbers of students and as a percentage of VCCS enrollment (Table 7). Community colleges are an economical alternative for students to complete the first two years of undergraduate study. For the 1989-90 academic year, annual community college tuition was $798 compared to $1,885 at Virginia Commonwealth University, for example.

It is likely that college transfer enrollments within the system will continue to grow. In 1989, the Commission on the University of the 21st Century projected that undergraduate enrollments in Virginia will increase 30 percent by the year 2005. Encouraging community colleges as an alternative in completing the first two years of the baccalaureate is an economic alternative for the Commonwealth, as well as the student. Community college students benefit from lower tuition costs, while the State spends less per student to support the cost of education at community colleges. However, if community colleges are to assist in meeting the challenge of increased enrollments, students must be assured that their community college credits will be accepted by senior institutions as discussed in Chapter VI.

Table 7

College Transfer and Occupational Technical Headcount Enrollments Fall Terms 1984 through 1989

Fall Term	College Transfer Enrollment	College Transfer Percent	Occupational Technical Enrollment	Occupational Technical Percent
1984	19,817	19%	39,067	37%
1985	21,599	20	40,261	37
1986	23,639	20	39,559	34
1987	26,318	21	41,264	34
1988	26,476	23	37,471	33
1989	31,437	25	40,416	32

Source: VCCS enrollment data.

Occupational Technical Programs. While college transfer programs have gained enrollment over the last five years, enrollment in occupational technical programs as a percentage of total enrollment has been declining (Table 7). Basic occupational technical programs are available at each of the 23 colleges, although there is greater diversity in offerings at the larger schools. Occupational technical programs include such topics as dental assisting, mechanical design, mining, nursing, and welding.

College presidents noted that it can be cheaper to educate students in college transfer programs than students in occupational technical programs. Occupational technical programs can be expensive due to equipment costs. For instance, a diagnostic engine analyzer used in automotive repair programs can cost from $15,000 to $25,000. J. Sargeant Reynolds spent $125,000 eight years ago to equip the college's diesel fuel injection laboratory.

Continuing Education. Continuing education is another major emphasis of the community college mission. Topics for continuing education courses include computer literacy, radiation safety, beginning sign language, fundamentals of managing people, and many others. Like college transfer and occupational technical programs, continuing education was defined in the original *Code of Virginia* section establishing the VCCS. These courses and activities have also become an important way for the VCCS to meet the economic development component of its current mission.

Continuing education may include credit or non-credit courses. For non-credit courses, instead of college credit, students receive continuing education units (ceus). Activities reported in non-credit continuing education varied widely among the colleges. Northern Virginia Community College offered over 67 percent of all system sponsored activities in the 1988-89 academic year. Two colleges, Piedmont Virginia and Southwest Virginia, offered no non-credit continuing education activities or courses during this period. There was great diversity among the other 20 colleges (Appendix D).

Community Service. Community service programs, providing educational and cultural opportunities for area residents, are also held by the colleges. Community service courses are non-credit courses in which no ceus are awarded. Community service courses were reported by all 23 colleges.

In addition, there are many community service activities sponsored by the colleges that are not courses. For instance, colleges sponsor lectures, art exhibits, and job fairs. The extent of community service activities and courses reported by the colleges varies (Appendix D).

Pre-collegiate Education. Pre-collegiate education provided by the community colleges includes developmental, adult literacy, Adult Basic Education, and General Educational Development programs. Developmental programs are designed to help academically deficient students enrolled in the community colleges build skills to succeed in subsequent college level coursework. Developmental courses include the topic areas of English, math, and reading. Enrollments in developmental courses in

the VCCS have remained fairly steady in the last five years at around 13 percent of total enrollments (Appendix D). They are an important aspect of providing access to higher education, by allowing access for those initially inadequately prepared for college work. All 23 colleges offer developmental programs. In addition, ten of the 23 colleges reported involvement in other pre-collegiate services in academic year 1988-89 (Appendix D). These services were adult literacy, ABE programs, and GED programs.

The role of community colleges in pre-collegiate activities like adult literacy is expanding. For instance, as of July 1, 1990, five of the community colleges had employee development directors — brokers for all literacy education services in a given community college service area. The five colleges — New River, Patrick Henry, Paul D. Camp, Southside Virginia, and Wytheville — were selected by the State Adult Literacy Committee based on need in their areas and the previous track record of the colleges in literacy efforts. Another example of pre-collegiate efforts is the high school diploma program at Southwest Virginia Community College during the 1989-90 academic year. The college reported receiving $15,000 from the Appalachian Regional Commission for the program and matching this grant with a $15,000 in-kind contribution from the college.

In interviews, the former Chancellor of the VCCS stressed the need for pre-collegiate activities other than developmental programs to be added to the mission. Although not all presidents discussed the issue, in interviews some presidents also cited the need for pre-collegiate services like adult literacy. Others did not see the need for their colleges to be involved in these services, referring students needing such assistance to the local school divisions in their areas. The State Board Chairman does not believe the Commonwealth has decided on the roles the various public educational institutions should play in pre-collegiate activities like adult literacy.

In interviews, State officials and community college administrators involved in literacy programs note several advantages of community college involvement over that of secondary schools. First, they note that secondary schools have already attempted to serve these students once. Second, it is hard for adults to return to high school facilities because of the stigma attached. Students would rather say they were attending a college class than a high school class. Third, community college instructors are experienced in teaching adult students. Fourth, community colleges may be better able to deliver effective workplace literacy programs.

However, other State officials have raised two disadvantages of community college involvement in adult literacy, ABE, and GED efforts. First, they question whether community colleges, as institutions of higher education, should be involved in serving students functioning below the high school level. Second, there may be duplication since Virginia's local school divisions also are involved in these programs.

Recommendation (1). **The Secretary of Education, in collaboration with the State Board for Community Colleges, the State Council of Higher Education for Virginia, the Board of Education, and other appropriate entities, should develop a State policy on adult pre-collegiate education, with**

roles and responsibilities of various public education institutions clearly defined. Specific attention should be devoted to assessing the appropriateness of community college involvement in adult literacy, Adult Basic Education, and General Educational Development programs. If involvement by community colleges in these areas is deemed appropriate, the policy should specify the extent to which the community colleges should be involved with these programs and how such involvement should be funded.

Inmate Education Efforts. Community colleges became involved in inmate education in the 1960s. As the prison system has grown, so has this involvement. In the 1988-89 academic year, 13 of the 23 colleges reported offering courses in State- or locally-run corrections facilities (Table 8). An estimated $1.9 million in State general fund appropriations went to inmate education programs in 1988-89 through courses provided by community colleges. Community college inmate education efforts may be college transfer, occupational technical, continuing education, or pre-collegiate programs. The largest programs were run by Southside Virginia and J. Sargeant Reynolds community colleges.

Virginia Western's prison education efforts were unusual because they involved a large number of facilities, most of which were not in the college's service region. The college's involvement was through the Virginia CARES pre-release program sponsored by community action agencies. Of the State's 47 major correctional institutions and field units operating during the 1988-89 academic year, Virginia Western reported operating programs in 39. In addition, the college reported operating a program in one locally-run facility.

Questions could be raised as to whether or not community college programs should be offered in correctional facilities especially to those offenders serving long-term sentences with little chance for parole. However, there is a benefit to society and taxpayers if community college programs reduce recidivism when these inmates are released. Several inmates interviewed by JLARC staff stressed the difference community college programs have made in their lives. Prison administrators, college staff, and inmates interviewed also said the programs provide a constructive way for inmates to use their time while in prison.

The extent to which inmates benefit from community college programs is an important question for the State to address, since the demand for such programs is expected to increase with the scheduled opening of new prisons statewide. However, it is difficult to assess the true benefit of these programs, since no comprehensive data have been collected to assess their impact on employment and recidivism. The VCCS is now involved in the assessment of its more traditional educational programs. The success of prison education efforts in benefiting an inmate's return to society should also be examined.

Recommendation (2). **The Virginia Community College System, in conjunction with the Virginia Parole Board, the Virginia Department of Corrections, and the Department of Correctional Education, should conduct**

Table 8

Inmate Education Programs 1988-89 Academic Year

College	Correctional Facilities	Number of Students Headcount	FTES
Blue Ridge	Augusta Correctional Center Staunton Correctional Center	178	11.9
Eastern Shore	Accomack County Jail	14	—*
John Tyler	Federal Correctional Institute	164	32.8
J. S. Reynolds	James River Correctional Center Powhatan Correctional Center VA Correctional Center for Women	957	200.23
Lord Fairfax	White Post Field Unit No. 7	40	8.0
Mountain Empire	Wise Field Unit No. 18	76	15.2
New River	Radford Jail	6	—*
Paul D. Camp	Southampton Correctional Center Deerfield Correctional Center	392	76.6
Piedmont Virginia	Joint Security Complex	49	9.8
Southside Virginia	Brunswick Correctional Center Mecklenburg Correctional Center Nottoway Correctional Center	996	191.5
Tidewater	Tidewater Correctional Unit No. 22 Norfolk Naval Brig	154	32.4
Virginia Western	Virginia CARES programs in 40 correctional facilities	345	36.0
Wytheville	Bland Correctional Center	134	26.8
VCCS TOTAL		3,505	641.23

* Courses were for an ABE program and therefore non-credit.

Source: 1989 JLARC survey of community colleges.

research on the cost and impact of inmate education provided by the Virginia Community College System. The research should include, but not be limited to, an assessment of the effects of VCCS education on post-incarceration employment and earnings, as well as recidivism.

Geographic Accessibility

Student travel time and students' proximity to community colleges have improved since the 1975 review. The VCCS has improved geographic access through additional campuses, improved transportation services, and increased off-campus instruction.

Commuting Time and Distance. Since the 1975 JLARC review, the system has made significant progress in meeting the geographic accessibility component of its current mission statement. It appears that the community colleges' 34 campuses provide adequate statewide geographic assess. The 1975 study found that at nine of the colleges, 50 percent or more of surveyed students lived more than 20 miles from campus. The 1989 JLARC survey of students found that only two colleges had 50 percent or more of their students traveling to classes 20 or more miles from home — Wytheville and Southwest Virginia. The survey of students found that on average, community college students travel 14 miles to get to class, and spend an average of 22 minutes en route.

Additional Campus Locations. The location of college campuses, with one change, was originally established in A Proposed Master Plan for a Statewide System of Community College Education in Virginia in 1976. According to interviews with community college presidents, not all of the original campuses were appropriately located to serve the needs of the localities in their service areas. However, additional campuses and growth in some localities have helped rectify the majority of these situations. The State Council of Higher Education for Virginia (SCHEV) has been directed by the General Assembly to study the location of existing and planned community college campuses with respect to enrollments and 1990 United States Census of Population data. SCHEV is to report its findings to the General Assembly by October 1991.

Improved Transportation Services. Geographic access has also been improved with an increase in available transportation services. The 1975 study found approximately 25 percent of students had difficulty attending classes due to lack of transportation, while less than two percent noted difficulty in the 1989 JLARC survey of students.

Transportation services provided by both colleges and local governments have increased since the 1975 review. In 1975, only three colleges reported such services. In the 1989 JLARC survey of colleges, 13 of the colleges said local governments in their service area provided at least limited transportation services for some students. These services ranged from public transportation in all localities of the service region for

Wytheville and Southwest Virginia community colleges to limited transportation by local community service agencies and school divisions in Southside Virginia Community College's service region.

In addition, seven colleges reported providing some form of transportation for students. Five of the colleges provide limited transportation, through grant monies, to students eligible for grant services. For example, both Eastern Shore and Virginia Western reported providing limited transportation to students eligible for Job Training Partnership Act services.

Increase in Off-campus Instruction. To improve geographic access, the 1975 JLARC study suggested that community colleges offer more off-campus courses. At that time, funding for the colleges discouraged off-campus offerings. With a change in the funding system so that community colleges were no longer penalized for off-campus offerings, there has been a marked increase in the number of off-campus students. In the 15 years since the 1975 JLARC review, off-campus student enrollments have increased 260 percent, while overall enrollment grew by 58 percent over the same period. It is likely that real growth in off-campus enrollments is even higher since VCCS enrollment data understate off-campus enrollment figures and do not count students in non-credit courses. For Fall semester 1989, colleges offered 2,833 courses in off-campus locations (Appendix D). This ranged from Northern Virginia Community College, which offered 493 of these courses, to Eastern Shore, which offered 11 off-campus courses. Statewide, 42 percent of these courses were taught in public school facilities.

Financial Accessibility

Another key measure of accessibility is student tuition cost. Tuition for the 1989-90 academic year was $26.60 per credit hour, which for a student taking 15 credit hours in the Fall and Spring semesters would be $798 a year. Tuition for the 1990-91 academic year will increase to $28.60 per credit hour (including a surcharge) or $858 a year.

Almost 94 percent of students surveyed in the 1989 JLARC survey of students thought their community college tuition was reasonable. This was true even when the student or the family was paying the full cost of tuition or when the student was unemployed. For 37 percent of surveyed students, a third party was paying some or all of their tuition costs. Over 76 percent of surveyed students were employed, over 72 percent of these full-time.

Thirteen of the 23 presidents, in interviews, thought that community college tuition was reasonable. They noted two reasons for the view that tuition is reasonable. First, in comparison to other post-secondary education options, the community colleges cost students less. For instance, for full-time undergraduate students at public senior institutions in Virginia, the yearly tuition charge is higher. For example, at Old Dominion University tuition was $1,681 for the 1989-90 academic year, and at Virginia

Polytechnic Institute and State University it was $2,352. Tuition is also higher at private, post-secondary, career training schools than at community colleges. The second reason some presidents noted was the State's tuition policy for community colleges. This policy provides public support of 80 percent of program costs for in-State students, with students paying the remaining 20 percent. The presidents who cited the policy believe it is an appropriate one for Virginia.

While the evidence above would suggest that tuition is reasonable, there is some reason to believe it is not resonable for all students. The community college tuition rate is high when compared to other southeastern states. According to the Southern Regional Education Board, in a survey of 15 southern states, Virginia ranks third behind Maryland and Georgia in in-State tuition charged by two-year public institutions. The board reported the regional median tuition in the 15 states as $675 for the 1988-89 academic year.

Eleven percent of the students surveyed in the 1989 JLARC survey of students had taken fewer courses than they wanted to because of the tuition. In interviews, the former Chancellor and many of the presidents said they believe that there are some students who are simply not enrolling in classes due to the high cost. However, the VCCS can only supply anecdotal evidence that this is occurring.

Some access for disadvantaged students is accomplished by financial aid programs. A variety of types of aid, including grants, loans, and student employment programs, is available. Existing programs do seem to meet tuition needs, according to financial aid officers JLARC interviewed. However, the officers said the programs do not provide enough additional money to cover a student's living expenses while attending college. In the last five years, the percent of VCCS students receiving financial aid has decreased, but not markedly. Financial aid dollars per recipient have actually gone up slightly over the five-year period.

Community college foundations at the local level have also helped with financial access for students. In the 1989 JLARC survey of colleges, all 22 colleges with active foundations cited fund raising as the primary activity of their foundation. The majority of these specifically noted raising funds for student scholarships.

A January 1986 study by VCU's Survey Research Laboratory recommended that SCHEV take the lead in sponsoring tuition impact research or that, in the absence of SCHEV sponsored research, the VCCS should do its own study. The VCCS did conduct such a study, released in January 1987, concluding that the 1986 tuition decrease did increase enrollment. SCHEV officials have raised issue with the methods and conclusions of that study. One of SCHEV's goals for the next two years is to "accelerate efforts to keep the price of higher education as low as possible for Virginia students." SCHEV, in collaboration with the VCCS, should examine to what extent tuition cost may be a barrier to enrollment in community colleges.

Recommendation (3). **The State Council of Higher Education for Virginia staff, in collaboration with the Virginia Community College System**

staff, should examine the extent to which tuition may be a barrier to enrollment in Virginia's community colleges and report the findings to the State Board for Community Colleges.

RESOURCE MANAGEMENT

The VCCS has had to manage its resources efficiently in order to meet its expanded mission. However, in recent years enrollments have increased sharply, while State funding per student has remained level and educational costs have risen. The VCCS has responded to this situation by devoting a growing proportion of its operating funds to personal services such as instruction, and a decreasing proportion to facilities maintenance and other non-personal service items. The VCCS has also responded by increasing the workload of its instructors and counselors, and by using more part-time faculty.

As a result, there is growing evidence of strain on the system. Indicators such as student-to-faculty ratios, part-time faculty usage, and counselor-to-student ratios have been growing steadily. The system anticipates a number of major facilities maintenance projects in the coming decades, and there is a lack of consensus between SCHEV and the VCCS as to whether facilities are adequate for current service levels. While these indicators are not conclusive evidence that the quality of education is in jeopardy, community college administrators are becoming concerned about the ability of the system to adequately serve increasing numbers of students.

In spite of the VCCS's past stewardship, the system is now faced with an even greater challenge to better manage its resources in light of tight State budget resources. The VCCS should act now to curb instructor and counselor staffing trends in order to maintain appropriate staffing levels into the future, while preserving its commitment to serve citizens demonstrating an ability to benefit. At the same time, the system should develop a long-range facilities plan in order to identify and prioritize its maintenance and construction needs for the coming decades.

Revenues and Expenditures

During the past five years, State general fund appropriations per FTE student have remained relatively level for the VCCS (Table 9). The State general fund appropriation to the VCCS has increased from about $140 million in FY 1986 to about $190 million in FY 1990, an increase of about 35 percent in five years. This increase in funds matched the increase in enrollments, which was also 35 percent during the same period.

VCCS educational and general expenditures per FTE student have also been relatively level over the past five years (Table 9). Educational and general expenditures include all funds devoted to instruction, public service, and administration

Table 9

Trends in VCCS State General Fund Appropriations And Educational and General Expenditures FY 1986 through FY 1990

Fiscal Year	FTE Student Enrollment	Appropriation Dollars Per FTE Student	Expenditure Dollars Per FTE Student
FY 1986	51,380	$2,700	$3,595
FY 1987	54,928	2,740	3,587
FY 1988	58,310	2,794	3,662
FY 1989	61,965	2,903	3,737
FY 1990	69,513	2,692	3,592

Notes: The FY 1990 figure for appropriations represents the initial appropriation.

Educational and general expenditures per FTE student excludes federal work-study and community education/public service. Figures were computed for credit enrollments only.

The FY 1990 expenditure is estimated based on budgeted amounts.

Source: VCCS Financial Statements, FY 1986 to FY 1989, 1989 Appropriations Act, and VCCS budget section data.

exclusive of expenditures for auxiliary enterprises and other miscellaneous categories. Educational and general expenses comprise over 90 percent of all operating expenses in the VCCS.

While revenues and expenditures per FTE student have remained stable in recent years, the cost of higher education has increased nationally. Over the last five years, the national higher education price index, which tracks inflation in higher education institutions, rose over 15 percent. As its revenues have not kept pace with cost increases, the VCCS has spent a growing proportion of its funds on personal services, particularly instruction. In FY 1986, personal services constituted 81 percent of VCCS educational and general expenditures (Appendix E). This percentage had increased to 85 percent by FY 1990. More than 80 percent of these expenditures are salaries and fringe benefits to faculty for classroom instruction.

Instructional Staff

The VCCS has primarily used two staffing strategies to serve an increasing number of students and an expanding array of courses. First, instructors have taught,

on average, greater numbers of students in their classes. As a result, the student-to-faculty ratio for the system has increased steadily. Second, utilization of part-time faculty has increased to provide more course sections. Based on national patterns and the perceptions of community college administrators, the VCCS has exceeded recommended levels in its use of part-time faculty.

VCCS administrators are concerned that continuation of these staffing trends could hurt educational quality in the system. Therefore, the VCCS should implement strategies for controlling faculty workload and part-time faculty usage at acceptable levels. While these strategies could result in restricted access in some programs and courses, they would not compromise the essential nature of the system's open admissions policy.

Instructional Workload. Instructional workload can be measured in terms of the number of FTE students served per FTE instructor, or the student-to-faculty ratio. The student-to-faculty ratio in the VCCS has been rising steadily in recent years, from 15.47-to-one in academic year 1985-86 to 18.65-to-one in academic year 1989-90 (Figure 3).

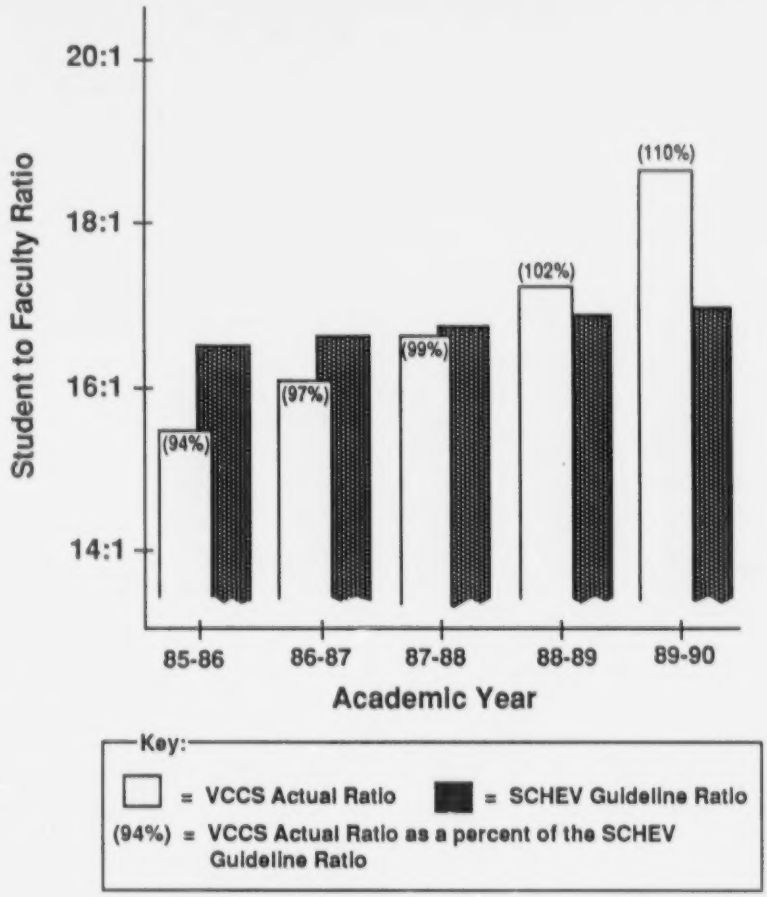
SCHEV staffing guidelines may be used to develop guideline student-to-faculty ratios for each community college and for the system. These guidelines state the number of FTE students necessary to produce funds for one FTE faculty. The ratios vary across instructional disciplines from a low of 10-to-one to a high of 22-to-one. The guideline ratio for a college reflects the mix of enrollments across the various disciplines at the college. The SCHEV guideline ratio for the system has also risen since 1985-86, reaching a high of 16.97-to-one in academic year 1989-90.

A comparative measure can be derived by relating the actual student-to-faculty ratio in the VCCS to the SCHEV guideline ratio. Comparing actual VCCS ratios to SCHEV guidelines, the VCCS has attained and exceeded the SCHEV guideline ratio over the last five years. In 1985-86, the VCCS operated at 94 percent of the SCHEV guideline ratio. By 1989-90, the VCCS ratio was ten percent greater than the SCHEV guideline ratio. Stated another way, in 1989-90 the VCCS served, on average, ten percent more FTE students per FTE instructor than they were expected to under SCHEV guidelines. However, these comparative workload measures varied across the individual colleges in 1989-90. For example, Eastern Shore operated at 76 percent of its SCHEV guideline ratio and Thomas Nelson operated at 125 percent of its guideline ratio (Appendix F). It should be noted that SCHEV staffing guidelines are not intended to prescribe optimal class sizes. But the guidelines do provide a means of relating instructional service levels to funding levels.

One reason the VCCS exceeded its guideline student-to-faculty ratio is that, like most of Virginia's public institutions of higher education, the VCCS does not receive 100 percent of its guideline calculation. In 1989-90, two of Virginia's 17 public institutions received more than 100 percent of guideline positions, and 15 received less than 100 percent. The VCCS, along with George Mason University and Radford University, received the lowest percentage of guideline positions, which was 90 percent.

Figure 3

VCCS Actual Student-to-Faculty Ratios Compared with SCHEV Guideline Ratios 1985-86 through 1989-90 Academic Years



Source: VCCS productivity analysis system.

Use of Part-time Faculty. Part-time faculty taught an increasing percentage of the total student credit hours in the system from 1985-86 to 1989-90, reaching a high of 47 percent (Table 10). The range of percentages for individual colleges in 1989-90 varied from 34.6 percent at Eastern Shore to 60 percent at Rappahannock (Appendix F). Twenty-one colleges exceeded 39 percent, and eight exceeded 49 percent in their use of part-time faculty.

Table 10

Percentage of Student Credit Hours Taught by Part-time Faculty 1985-86 through 1989-90 Academic Years

Academic Year	Percentage
1985-86	40.0%
1986-87	42.6
1987-88	44.2
1988-89	44.2
1989-90	47.0

Source: VCCS productivity analysis system data.

Part-time faculty usage and student-to-faculty ratios are closely related. Part-time faculty allow the colleges to offer additional course sections in popular disciplines, as opposed to offering fewer sections with higher student-to-faculty ratios. This relationship was illustrated in the fall semester of 1989. In this semester, part-time faculty provided only 37.5 percent of the instruction in the system. However, the student-to-faculty ratio for the system was 20.05-to-one, or 118 percent of the SCHEV guideline ratio for that semester. Part-time faculty played a greater role in the system in the summer 1989 and spring 1990 semesters, resulting in a lower student-to-faculty ratio and higher level of part-time faculty usage for the year.

Concerns About Quality. While there are no objective standards for optimal student-to-faculty ratios, the steadily rising student-to-faculty ratios in the VCCS are causing concern within the system. The VCCS exceeds the national 1988 median student-to-faculty ratio for community, technical, and junior colleges, which was 17-to-one. The former Chancellor stated that in his view a student-to-faculty ratio of around 15-to-one was reasonable for a community college, and he was concerned whether the VCCS could fulfill its teaching mission at a ratio above 18-to-one. In interviews, a number of presidents also expressed concern about strains on the instructional resources at their colleges.

As a system, the VCCS exceeds national levels in its use of part-time faculty. In 1987, the American Association of Community and Junior Colleges Commission on the Future of Community Colleges estimated that nationally, about 25 percent of all community college credits are earned through classes taught by part-time faculty. Based on the college survey, 17 of 23 colleges reported the proportion of FTE part-time positions at their institution was too high.

Part-time faculty can benefit an institution in a variety of ways, as college administrators pointed out during interviews. As open-admissions institutions, the community colleges experience enrollment fluctuations. Part-time faculty provide the colleges with flexibility to meet these unexpected shifts in demand. Part-time faculty who are practitioners can bring the most current ideas and skills into the classroom, and can be excellent instructors. Part-time faculty also allow significant cost savings for the community colleges and the Commonwealth, as their salaries are generally lower than those of full-time faculty.

In interviews, college administrators also pointed out the disadvantages to extensive use of part-time faculty. Most part-time faculty members provide limited office hours for their students. Part-time faculty are not typically involved in curriculum development, college planning, student assessment, student advising, and other routine non-instructional activities of full-time faculty. As a result, the non-instructional workload of full-time faculty could increase to the point where the quality of the activities may be diminished. A large number of part-time faculty also places additional burdens on college division heads, as instructors must be oriented, supervised, and evaluated whether they teach one course or five. Some of these disadvantages are illustrated by the comments of a community college president:

> *According to the president, the chief disadvantage of part-time faculty is that their primary commitment is usually to their full-time employer, not the college. Therefore, they have a limited amount of time. Sometimes, that means part-time faculty cannot invest in as much preparation. They also may not have the same knowledge of resource materials as full-time faculty.*
>
> *The president also noted that part-time faculty are not available for more extensive student advising, for example, following up with students with uncompleted work from previous semesters. Once the course is completed, their relationship with the student is over.*
>
> *Part-time faculty are not available to help with administrative duties either, according to this president. They do not serve on committees and they are not involved in the day-to-day academic life and culture of an institution. The president explained that when an institution relies too heavily on part-time faculty these duties go undone, are not done well, or become an extreme burden on full-time faculty. The president is fearful that the system's full-time faculty are now overburdened with administrative duties.*

Student-to-faculty ratios and part-time faculty usage are only two of many important factors which might affect the quality of education in the VCCS. Ultimately, a comprehensive assessment of classroom instruction and student outcomes would be required to determine whether educational quality is indeed diminished under the current staffing levels. The VCCS, like Virginia's other public institutions of higher education, is in the early stages of an ongoing student assessment program which may

provide more definitive answers about educational quality. However, considering the inter-relationship between student-to-faculty ratios and part-time faculty usage, the upward trends in both of these indicators appear to be a legitimate cause for concern in the VCCS. The VCCS should take four steps to control these staffing trends.

First, the VCCS should place limits on the percentage of SCHEV instructional staffing guidelines at which individual colleges are allowed to operate. This strategy could serve to control the upward trend in student-to-faculty ratios within the system, while allowing the colleges flexibility in deciding how to allocate resources across and within disciplines. The actual limits to be imposed should be decided within the VCCS, and should be based on considerations such as educational quality, availability of resources, and the needs of individual community colleges.

Second, the VCCS should impose limits on part-time faculty usage at the community colleges. Again, these limits should be decided within the system, and based on the same considerations of quality, resources, and college needs. Third, a systemwide policy should be established on the orientation, supervision, and evaluation of part-time faculty to promote consistency across the system. Fourth, the VCCS should continue to explore alternative ways of delivering instruction such as regional programs, telecommunications, and extended learning for those students who are capable. (Extended learning involves self-paced, independent study of course materials.)

The first two of these four strategies could have the effect of limiting enrollments in the VCCS. In the absence of sufficient resources to offer additional class sections, it is possible that a community college might have to turn away students rather than exceed its operating limits on instructional resources and part-time faculty usage. These strategies would not compromise the open admissions policy of the VCCS. The community colleges could continue the open admissions policy and serve a wide range of individuals demonstrating an ability to benefit, but would have to limit, based on resource constraints, the number of individuals who could be admitted.

Recommendation (4). **In order to control the upward trend in student-to-faculty ratios, the Virginia Community College System should impose limits on the percentage of State Council of Higher Education for Virginia instructional staffing guidelines at which individual colleges are allowed to operate. The actual limits should be decided within the VCCS, and should be based on considerations such as educational quality, availability of resources, and the needs of individual community colleges.**

Recommendation (5). **The Virginia Community College System should impose limits on part-time faculty usage at the community colleges. The actual limits should be decided within the VCCS, and should be based on considerations such as educational quality, availability of resources, and the needs of individual community colleges.**

Recommendation (6). **The Virginia Community College System should establish a policy on the management of part-time faculty, including requirements for orientation, supervision, and evaluation of part-time faculty.**

Recommendation (7). **The Virginia Community College System should continue to explore alternative strategies for instructional delivery, including developing additional regional programs which serve two or more service regions and continuing to develop alternative means of course delivery such as telecommunications and extended learning.**

Counseling Services

Student counseling is an important function in the VCCS because of the distinctive needs of the student population. In addition to State-funded counselors, the VCCS employs a number of grant-funded counselors who are typically employed to work with a specific segment of the student population. As of Fall semester 1989 the VCCS employed 145 full-time, State-funded counselors and 25 grant-funded counselors.

In 1975, JLARC found understaffing of counseling services at some colleges to be a cause for concern. Using a criterion ratio of 300 to 350 headcount students per counselor, counselor services were understaffed at 15 of the 23 colleges. The highest ratio in the system was 670-to-one at Northern Virginia Community College. The mean ratio for Fall term 1974 was 506-to-one. The JLARC study expressed concern that this level of counseling staff could not meet the needs of community college students sufficiently.

As of fall 1989, student-to-counselor ratios in the VCCS were much larger than in 1975. Focusing on State-funded counselors, the headcount student-to-counselor ratio for the system was 884-to-one, ranging from 245-to-one at Eastern Shore Community College to 2,047-to-one at Wytheville (Appendix F). The median ratio was 1,018-to-one. Including grant-funded counseling positions, the system ratio was 754-to-one, ranging from 163-to-one at Eastern Shore to 1,437-to-one at Mountain Empire, with a median ratio of 832-to-one.

These student-to-counselor ratios significantly exceed guidelines published by the American School Counselor Association (ASCA). It is the position of ASCA that a comprehensive counseling program should have a student-to-counselor staffing ratio of not more than 300-to-one. Using this criterion, 22 of the 23 community colleges are short staffed considering only State-funded positions, and 21 colleges are short staffed even when grant-funded positions are included.

The ASCA guidelines are for reference only, and institutions should utilize staffing levels which reflect their individual needs. The majority of community college administrators interviewed indicated that a student-to-counselor ratio between 500-to-one and 700-to-one is an adequate, though not optimal, staffing level. Eighteen

colleges have ratios greater than 700-to-one using only State-funded positions, and 14 colleges have ratios larger than 700-to-one when grant positions are included.

It is not clear whether the high student-to-counselor ratios within the VCCS have a negative impact on the quality of counseling services. Students who were surveyed generally did not complain of a lack of access to counseling, and less than ten percent of those surveyed rated counseling services at their colleges as fair or poor. On the other hand, more than two-thirds of counselors surveyed felt that counseling services were understaffed at their college.

Interviews with college administrators as well as the counselor survey revealed that the responsibilities of VCCS counselors tend to differ from college to college. For instance, counselors at some colleges do a significant amount of academic advising, while at other colleges faculty do most academic advising. Depending on the specific responsibilities of counselors at a college, high student-to-counselor ratios may or may not be a problem.

Currently, there is a lack of comprehensive information on the role and responsibilities of counselors in the VCCS. Considering the substantial growth in student-to-counselor ratios in the system since 1975, the VCCS should conduct a study of the role of counselors within the system. The study should first identify what role VCCS counselors should play in the education of VCCS students. Based on this role, counselor responsibilities should be defined and appropriate guidelines for counselor staffing should be developed.

Recommendation (8). **The Virginia Community College System should conduct a study of its counseling services to determine: 1) the appropriate role of counselors in the overall education of VCCS students, and 2) the range of activities for which counselors should be responsible. Based on this information, the VCCS should establish minimum counselor staffing guidelines for each college.**

Facilities Management

As VCCS facilities continue to age, the system is likely to face major facilities maintenance needs in the coming decades. For example, colleges across the system are beginning to experience problems with heating, ventilation, and air conditioning units as the original systems wear out. At the same time, SCHEV and the VCCS disagree on the adequacy of VCCS facilities for current service levels. The VCCS has not quantified all of its long-range facilities needs, and should develop a long-range facilities plan to identify and address its facilities needs for the coming decades.

Maintenance Needs. The VCCS is responsible for a substantial number of buildings which are beginning to age. As of 1988, 24 percent of the 130 major academic buildings in the VCCS were over 20 years old (Appendix G). Another 28 percent were between 16 and 20 years old.

VCCS administrators expect that the aging of VCCS facilities will require increasing amounts of funds for maintenance and upkeep. Many VCCS building systems (such as heating, ventilation, and air conditioning (HVAC) systems and plumbing systems) as well as roofs are nearing the end of their life spans. Fifty-two percent of all major VCCS academic buildings were more than 15 years old in 1988. Literature on building systems indicates that most major systems last 15 to 30 years.

Currently, there are 16 major HVAC renovation projects underway in the VCCS, at an estimated total cost of $13 million. The former Assistant Vice Chancellor for Facilities and Engineering stated that these renovation projects represent approximately one-fourth of the demand that will be encountered by the system in the next ten to 15 years. As the VCCS indicated in its long-range operating plan, planning for the replacement of major mechanical systems before they actually fail should be a top priority.

SCHEV Capacity and Utilization Study. In 1989-90, SCHEV conducted a facilities capacity and utilization study in the VCCS. According to the analysis of space needs reported in December 1989, the VCCS was expected to have an excess of 151,618 square feet for the 1990-91 academic year, although individual colleges and campuses do show deficiencies in several space categories (Appendix G). Based upon this data, SCHEV projected that 14 colleges would have more overall space than necessary to accommodate their 1990-91 academic year enrollments.

However, there are three limitations in the data used in the analysis of space needs. First, the analysis was based upon enrollment projections which did not anticipate the unexpected 12 percent increase in VCCS enrollments during the 1989-90 academic year. SCHEV, after consultation with the former VCCS Chancellor, projected that the system would have 49,095 FTE on-campus students during the regular session of the 1990-91 academic year. The VCCS actually had 56,612 FTE on-campus students during the 1989-90 regular session. If the student population remains constant for the 1990-91 regular session, actual enrollments will be 15 percent greater than the projection utilized in the analysis of space needs.

Second, the analysis of space needs was based upon capacity estimates for 1990-91 which included space funded for construction with lottery proceeds. During the 1989 session of the General Assembly, the VCCS obtained funding for four major construction projects through the first phase of the initial lottery act. However, unanticipated budgetary problems caused these four projects to be delayed indefinitely. Hence, the space inventory for the system in the analysis of space needs includes approximately 105,000 more square feet than the VCCS currently has.

Third, community colleges often report leased and rented space inappropriately as on-campus space. In its April 1990 report, the Chancellor's Task Force on Colleges, Campuses, and Facilities recommended that the VCCS adopt uniform definitions for classifying and inventorying on- and off-campus space. This recommendation should assist SCHEV staff in more accurately projecting future space needs.

VCCS Perceptions. VCCS college administrators, faculty, counselors, and students were surveyed about the adequacy of college facilities. Their assessment of college facilities varied from the conclusions reached by SCHEV. Based on survey responses, 79 percent of college administrators, 60 percent of faculty, and 67 percent of counselors surveyed felt that classrooms are inadequate to meet their needs (Table 11). More than half of the college administrators surveyed reported that current college facilities are inadequate to meet their needs for every space category. On the other hand, 90 percent of students surveyed are satisfied with available classroom space.

JLARC staff visited all 34 campuses of the 23 community colleges. The most common problems named by college staff were the lack of large lecture halls or auditoriums, and inadequate parking and physical education facilities. Students in the college transfer program must complete a physical education requirement prior to transferring, but 21 colleges lack adequate indoor physical education facilities. Patrick Henry and Tidewater are the only colleges with complete gymnasiums.

Considering the limitations of the recent SCHEV analysis as well as the lack of agreement between SCHEV findings and the perceptions of VCCS personnel, it is difficult to establish whether VCCS facilities are adequate for current service levels. A VCCS task force has recently released a report on facilities. The report proposes uniform definitions for classifying on- and off-campus facilities and discusses the

Table 11

Perceived Inadequacy Of VCCS Facilities

	Percent Perceiving Facilities to Be Inadequate			
Space Category	College Admin.	Faculty	Counselor	Students
Classroom	79	60	67	10
Labs	79	74	65	16
Faculty Offices	73	48	*	*
Library	62	31	35	8
Outdoor Physical Education	53	85	72	13**
Indoor Physical Education	94	65	87	**
Parking	56	48	48	47
Counselor Offices	59	*	51	*
Lecture Halls	71	64	70	*

*Respondents were not asked about this space category.

**Students reported data on all physical education facilities, rather than separate data on outdoor and indoor facilities.

Source: JLARC analysis of 1989 college, faculty, counselor, and student surveys.

appropriateness of SCHEV space guidelines for the VCCS. In addition, the report recommends further study in the areas of building renewal and development, and incorporating technology in facilities planning.

The VCCS has not revised its facilities master plan since 1967. The VCCS should use its recent task force report as a first step in the process of developing a revised facilities plan. The plan should inventory current facilities, project major maintenance needs, and project future needs for construction of major buildings. Maintenance and construction projects should be prioritized to identify essential needs versus lower priority projects. In developing the plan, the VCCS should consider the enrollment increases projected by the Commission on the University of the 21st Century, especially as they might affect the various program areas described in the VCCS mission statement. According to SCHEV staff, the SCHEV space guidelines used in the capital outlay process will be revised during the summer of 1990. The VCCS should also consider planned revisions to SCHEV space guidelines in making its facilities planning decisions.

Recommendation (9). **The Virginia Community College System should prepare a long-range facilities master plan which would address major maintenance and renovation needs as well as the construction of new buildings. This plan should inventory current facilities, project current major maintenance and renovation needs, and project the types of buildings that will be required to meet future needs. Proposed projects should be prioritized. In the development of the plan, the VCCS should work with State Council of Higher Education for Virginia staff to develop a consensus on projected space needs.**

PRIORITIZING THE MISSION

Looking toward the future of the VCCS, there is a strong likelihood of continued enrollment growth. The State Council of Higher Education for Virginia is predicting little enrollment growth in the early years of this decade, but at least steady if not more dramatic increases beginning in 1995. According to the Commission on the University of the 21st Century, the VCCS will be expected to play an important role in serving these students. The pressure of potential continued enrollment increases means that managing resources may not be enough for the system to guarantee continued access and to maintain quality. Therefore, if enrollments continue to increase without a sufficient increase in State resources, the State Board should prioritize the mission's program areas — college transfer, occupational technical, developmental, continuing education (both credit and non-credit), and community service. The system would have to choose which programs and activities are essential, and which are of lesser importance.

One way for the State Board to prioritize the program areas would be to give first priority to those programs for which colleges receive State resources — college

transfer, occupational technical, developmental education, and credit continuing education. The State Board may choose to go further, and establish relative priorities among these four program areas. The State Board should next consider the two remaining program areas of the system's current mission — non-credit continuing education and community service. Lowest priority could be given to programs that push the parameters of the mission, specifically adult literacy, Adult Basic Education, and General Educational Development programs.

Some rationale for this approach can be found in the 1989 JLARC survey of colleges. All 23 colleges were asked to rank the program areas of the current mission statement. Among the 18 respondents to this question, there was a clear consensus that college transfer and occupational technical programs were the most important areas. There was a lack of consensus about the relative importance between developmental studies and continuing education, but community service programs were clearly ranked at the bottom.

Within the broad priorities set by the State Board, individual community colleges could then be given some flexibility to allocate resources to meet local needs. For instance, some colleges may decide, based on local need, to place greater emphasis on occupational technical programs and less emphasis on college transfer programs. Other colleges, again due to local needs, may place greater emphasis on developmental programs. Further, colleges could continue to decide what offerings are to be provided within program areas. For instance, a college may decide to offer automotive analysis and repair and not machine technology within the occupational technical program area.

In addition to deciding priorities among the program areas, the State Board should consider the costs and benefits of inmate education efforts. If it cannot be determined that community college inmate education programs yield tangible benefits, or if the VCCS cannot maintain sufficient resources to support its programs for non-inmate students, then resources currently consumed by inmate education programs could be reallocated to other, higher priorities.

Recommendation (10). **In the event of continued enrollment growth without increased State resources, the State Board for Community Colleges should prioritize the program areas of the current Virginia Community College System mission statement for budgeting and operating purposes. First priority should be given to the program areas of college transfer, occupational technical, developmental, and credit continuing education. The State Board may also wish to establish priorities among these four program areas. Second priority should be given to the remaining program areas of the current mission — non-credit continuing education and community service. Lowest priority should be given to programs not included in the current VCCS mission statement. Within the broad priorities established by the State Board, individual colleges could be given some flexibility to allocate resources to meet local needs.**

III. VCCS Funding and Budget Operations

Although the Appropriations Act lists individual appropriations for each community college, the Virginia Community College System (VCCS) is funded as a single institution of higher education. The State Board for Community Colleges has the authority to pool State-appropriated resources and reallocate them among the colleges, and it acts with this authority. The State Board uses a mathematical model to make this reallocation. The individual colleges are primarily responsible for day-to-day management of college budgets within limits set by this allocation.

Current concerns related to VCCS funding and budgeting fall into two categories — external considerations beyond the control of the VCCS, and internal budget and finance considerations over which the VCCS has control. With regard to external considerations, two aspects of the VCCS make it relatively unique among the State's higher education institutions. First, the VCCS serves a large proportion of part-time students. Today, about three-quarters of the student body attend part-time, compared to half in 1975. This factor is not adequately recognized in the funding of student services positions under State budget guidelines. Second, the college-by-college appropriation for the VCCS in the Appropriations Act causes confusion about VCCS funding as well as inefficiency in budget operations. In addition, the VCCS should work to solve internal problems related to enrollment reporting, the internal allocation model, student fees, and procurement.

EXTERNAL BUDGET AND FINANCE CONSIDERATIONS

The State general fund appropriation for the VCCS is set using higher education funding guidelines administered by the State Council of Higher Education for Virginia (SCHEV) . These guidelines are formula-driven and designed to achieve a degree of equity in higher education funding by recognizing the unique needs of each institution. However, the guidelines may not address the unique needs of the VCCS with respect to student services, and should be reassessed for the VCCS.

Beginning in 1980, the State Board for Community Colleges was given full authority to transfer appropriated resources between community colleges according to need. Despite this central authority, the Appropriations Act continues to provide figures for the number of positions and dollar amounts for each of the 23 colleges and the system office separately. This practice appears to be inconsistent with the structure and powers of the State Board for Community Colleges as a single governing board. In addition, the college-by-college appropriation gives a distorted view of actual funding and creates administrative inefficiencies.

State Funding Guidelines

SCHEV's funding guidelines are not unique for the community college system but are used for all higher education institutions. The funding formulas are primarily driven by enrollment figures based on full-time-equivalent (FTE) students. FTE students are defined as the annual number of student credit hours divided by 30, which is the number of hours a student takes during the year to be considered full-time. Another method of counting enrollments — headcount students — is the total number of different students taking at least one class.

The VCCS serves a much larger number of part-time students than other higher education institutions. However, since part-time students take fewer credit hours, each student has a smaller effect on the FTE count. For the VCCS, the FTE student count for the 1989-1990 academic year is 69,513 students, while the headcount figure is 128,195 students for the fall semester of 1989 (Table 12). Therefore, the VCCS serves almost two times as many headcount students as FTE students.

By contrast, most senior institutions serve similar numbers of headcount and FTE students. For example, most of Virginia Polytechnic Institute and State University's students attend full-time: the FTE student count is 24,644 for the 1989-90 academic year, as compared to the headcount figure of 25,189.

For funding purposes, the use of FTE students continues to make sense as a base for most categories of student needs. For example, in the area of student instruction the current FTE-based funding is preferable. Classroom instruction is provided based on the number of credit hours taught, and part-time students consume only a portion of the resources a full-time student does.

However, in at least one area headcount student enrollments may provide a better basis for funding than the present FTE-student basis. For student services, such as registration, financial aid, and counseling, part-time students typically receive the same basic services as a full-time student. Because the VCCS serves a relatively high proportion of headcount students, the system is disadvantaged relative to the State's other higher education institutions when student service needs are funded on the basis of FTE students.

SCHEV guidelines provide one adjustment for institutions with high numbers of part-time students. This adjustment is a small addition to classified positions which the FTE-based guidelines provide in the area of institutional support. However, no adjustment is made for teaching and research administrative positions which may be used for a range of student services such as counseling and registration. In the area of student services, the State higher education funding process appears to be inequitable with regard to community college funding. SCHEV should develop a more equitable adjustment to current guidelines to address this area.

Recommendation (11). **The State Council of Higher Education for Virginia should modify its higher education funding guidelines to address the VCCS' high proportion of part-time students.**

Table 12

Virginia's Higher Education Student Enrollments
Fall Headcount Students as a Percentage of Annualized FTE Students
Estimated 1989-1990 Academic Year

Institution	Headcount Students	FTE Students	Headcount as a Percent of FTE
Christopher Newport	4,832	3,601	134%
Clinch Valley	1,568	1,200	131
George Mason	19,747	4,369	137
James Madison	11,109	11,131	100
Longwood	3,323	3,381	98
Mary Washington	3,563	3,201	111
Norfolk State	8,351	7,670	109
Old Dominion	16,742	13,595	123
Radford	9,804	9,326	105
University of Virginia	21,321	20,180	106
Virginia Commonwealth	21,278	17,301	123
Virginia Polytechnic	25,189	24,644	102
Virginia Military Institute	1,300	1,573	83
Virginia State	4,047	3,637	111
William and Mary	7,541	7,510	100
Senior TOTAL	159,715	142,319	112%
VCCS	128,195	69,513	184%

Note: Headcount student enrollments are reported for fall of 1989 at mid-term. As a result, students enrolling for irregular session classes are not included.

Headcount figures can be less than FTE enrollments if the institution's students, on average, enroll in more than 30 credit hours per year.

Source: JLARC analysis of SCHEV enrollment data.

Appropriations Act Specifications

The practice of listing the VCCS appropriation by college gives a distorted view of actual funding. Since the VCCS has authority to transfer funds between programs and colleges, the Appropriations Act amounts serve only as starting points for individual college funding. The VCCS accomplishes transfers through an appropriation adjustment request form, which must be approved by the Department of Planning and Budget. In FY 1990, every community college received an initial

allocation different from the Appropriations Act (Table 13). For example, Tidewater Community College received $2.6 million (nine percent) more funding for FY 1990 than the Appropriations Act listed. Conversely, John Tyler Community College received $371,292 (five percent) less than the Appropriations Act amount.

The college-by-college appropriation also creates administrative burdens when resources are shifted. Each college's appropriation may be altered several times during a fiscal year, beginning when the VCCS reallocates the funds and later due to VCCS actions or State changes. For example, any general State adjustment such as a reversion may require separate actions for each college and the system office. The VCCS is required to request authorization for fund transfers through PROBUD, the State budgeting system. This paperwork amounted to 364 separate transactions in FY 1989.

Recommendation (12). **The Joint Legislative Audit and Review Commission should further review and assess the current practice of specifying individual community college appropriations in the Appropriations Act during its upcoming study of the Commonwealth's budgeting process. This practice should be assessed within the context of statewide budgeting practices.**

INTERNAL BUDGET AND FINANCE CONSIDERATIONS

Responsibility for VCCS internal budget and financial operations is shared by the system office and the 23 community colleges. In recent years, the VCCS has been recognized as meeting the Governor's management standards in the areas of financial reporting and controls, indicating satisfactory performance. While the system is generally in compliance with State procedures and its own State Board policies, five areas are in need of attention.

First, although enrollment records which are reported for funding purposes are generally accurate, opportunities for increased automation require a re-examination of record retention and security policies. Second, the VCCS should continue to assess the reasons for enrollment trends. Third, the VCCS uses an internal model to allocate resources, and a line item in the model is labeled inappropriately. Fourth, it appears that the State Board does not favor charging operating fees to students in an effort to maintain economic access. However, some colleges are requiring students to pay such fees directly to third party providers. Finally, two colleges have had problems in the area of compliance with State procurement policies regarding equipment purchases.

Enrollment Reporting

Enrollment figures are important to budget operations because State funding is primarily based on FTE students. Enrollment reporting is the responsibility of both

Table 13

Community College Resource Distributions: Appropriations Act vs Internal Allocation FY 1990

Recipient	Appropriations Act		Internal Allocation		Difference	
	Positions	Funding	Positions	Funding	Positions	Funding
Blue Ridge	112	$ 4,788,265	113	$ 5,172,089	+1	$ +383,824
Central Virginia	186	7,804,870	182	7,448,214	-4	-356,656
D. S. Lancaster	106	4,144,855	94	3,765,006	-12	-379,849
Danville	149	5,789,180	165	6,779,814	+16	+990,634
Eastern Shore	56	2,451,860	46	1,942,676	-10	-509,184
Germanna	95	3,641,530	106	4,294,750	+11	+653,220
J. S. Reynolds	477	18,228,380	481	19,167,536	+4	+939,156
John Tyler	201	8,029,500	196	7,658,208	-5	-371,292
Lord Fairfax	101	3,741,165	113	4,276,893	+12	+535,728
Mountain Empire	173	6,260,775	154	6,083,352	-19	-177,423
New River	204	7,975,840	199	8,019,444	-5	+43,604
Northern Virginia	1,524	59,016,910	1,538	62,240,187	+14	+3,223,277
Patrick Henry	106	3,970,775	102	4,115,446	-4	+144,671
Paul D. Camp	83	3,607,695	83	3,601,513	0	-6,182
Piedmont Virginia	158	6,116,040	161	6,520,788	+3	+404,748
Rappahannock	98	3,910,185	98	4,051,887	0	+141,702
Southside VA	153	5,602,070	150	5,677,527	-3	+75,457
Southwest VA	254	10,001,595	250	9,916,981	-4	-84,614
Thomas Nelson	313	12,403,170	312	12,236,399	-1	-166,771
Tidewater	719	27,465,200	764	30,050,525	+45	+2,585,325
VA Highlands	141	5,632,965	139	5,810,224	-2	+177,259
Western VA	308	11,829,245	307	12,049,999	-1	+220,754
Wytheville	138	6,105,475	132	5,907,626	-6	-197,849
Subtotal	5,854	$228,517,545	5,884	$236,787,084	+30	+$8,269,539
System Office	92	5,896,810	105	7,117,928	+13	+1,221,118
Computer Network	—	—	36	3,404,248	+36	+3,404,248
Reversion Clearing Account	277	35,366,914	198	22,472,009	-79	-$12,894,905
VCCS	6,223	$269,781,269	6,223	$269,781,269		

Notes: Appropriation figures reflect 1989 Session Appropriations Act for FY 1990. Internal allocation model figures reflect allocations made prior to FY 1990 and are subject to change as the year progresses.

The Reversion Clearing Account is a holding account for later transfers to the colleges and the system office. The account is used during the year to shift funds as specified per amendments, to implement State salary and fringe benefit changes, and to revert funds to the State general fund.

Column totals do not in all cases agree with individual sums due to rounding.

Source: 1989 Appropriations Act, FY 1990 VCCS Validated Resource Distribution, and VCCS budget section personnel.

the system office and the community colleges. The VCCS has developed a sophisticated automated reporting system to register students and screen for many data entry or procedural errors.

During the 1975 JLARC review of the Virginia Community College System, unreliable enrollment forecasts by the VCCS were found to result in excess appropriations at 20 of the 23 colleges. The VCCS is no longer responsible for issuing enrollment projections; therefore this earlier problem no longer exists. Instead, appropriations are primarily based on actual enrollments rather than projections. This appears to be appropriate given fluctuations in VCCS enrollments.

The current study included an enrollment audit to determine the accuracy of actual VCCS enrollment figures for the spring semester of 1989 (Appendix H). During the audit, a sample of student records at each college was compared to official automated records to check for errors. A total of over 2,300 student records were reviewed. The VCCS appears to be generally accurate in its count of enrollments. Minor errors were found at six colleges, but the impact on total system enrollment counts was minimal. In addition, college personnel responsible for student records were interviewed, and college policies and procedures were reviewed.

Three enrollment-related areas were found to be in need of additional attention. First, the VCCS is increasing its reliance on automated records without maintaining a sufficient audit trail in all cases. Second, greater security precautions are needed to safeguard sensitive student records. Third, continued study of enrollment trends is needed to assist community college planning.

Audit Trail. Accountability for accurate enrollment records is important given the central role of FTE enrollment figures in the operating and capital budgeting process. Student enrollment records are created during registration for classes using the VCCS student information system (SIS). However, the current version of SIS does not provide a complete automated audit trail of student records changes, and some enrollment changes are not documented in either automated or hard copy form. Interviews with student records administrators indicate that two community colleges are retaining most student records in automated form only, and other colleges are considering this possibility.

The State Board for Community Colleges policy currently allows records to be retained in automated form only, and some transactions such as telephone registration have no hard copy record. Adequate safeguards for accountability, including the existence of an audit trail, are in danger of being lost as some information related to changes to student records is not documented. The VCCS should reexamine its policies on record retention, particularly with regard to student registrations, changes of schedule, and class attendance on an audit basis. All colleges should be required to maintain a complete, documented audit trail for student records.

Recommendation (13). **The Virginia Community College System should, in conjunction with the Virginia State Library and Archives, reexam-**

ine VCCS policies on retention of records to ensure that a complete audit trail exists for student records transactions. Records of student transactions for registration, schedule changes, or approval to audit classes should be retained by community colleges for an appropriate time period. The internal audit section of the system office should monitor compliance with newly established policies for automated student record keeping through its electronic data processing audit function.

Security. Security of access to the SIS programs which permit changes of student records is important both for the integrity of student records and because of the confidential nature of these records. The SIS is designed to restrict access to qualified personnel through the use of passwords which are necessary to gain access to the automated system. While all colleges have SIS passwords in place, ten of the 23 colleges give temporary SIS access to faculty, counselors, or clerical staff to assist with registration during peak registration periods.

All colleges train these employees, and some colleges carefully monitor them through supervision in restricted areas. However, this practice carries some security risks and should be more carefully monitored by all of the colleges. The VCCS should expand its policies and procedures for community college personnel who access the student information system registration programs to include training requirements and further limits on access to sensitive student records.

Recommendation (14). **The Virginia Community College System should expand its policies and procedures for community college personnel who access the student information system registration programs to include training requirements and further limits on access to sensitive student records.**

Reasons for Enrollment Trends. While actual enrollment records are generally accurate, the VCCS has found it difficult to accurately project future enrollments. Unlike many of Virginia's senior institutions of higher education, which control enrollment through selective admissions, the VCCS operates as an open admissions institution. As a result of this policy, VCCS enrollments are closely tied to changes in the public's demand for classes.

Enrollment fluctuation appears to be high for several colleges within the VCCS. For example, Paul D. Camp and John Tyler show periods of decline followed by sharp upsurges (Table 14). In contrast, Southside Virginia and Tidewater show a pattern of steady growth. For Southside Virginia Community College, this growth averaged over ten percent per year for five years.

The VCCS has attempted to better understand the factors affecting enrollments to aid management and planning. In 1989, a survey of enrollment decisions of Virginia community college students was prepared at the joint request of the Secretary of Education, SCHEV, and the VCCS. The survey was conducted by the Survey Research Laboratory of Virginia Commonwealth University. This survey's results

Table 14

Selected Community Colleges
Annual FTE Student Enrollment
1986-87 Through 1989-90 Academic Years

College	Academic Year	Enrollment FTES	Change FTES	Change Percent
John Tyler	1986-87	1,892	—	—
	1987-88	1,874	-18	-1.0
	1988-89	1,887	13	0.7
	1989-90	2,238	351	18.6
Paul D. Camp	1986-87	610	—	—
	1987-88	574	-36	-5.9
	1988-89	526	-48	-8.4
	1989-90	635	109	20.7
Southside Virginia	1986-87	1,106	—	—
	1987-88	1,279	173	15.6
	1988-89	1,460	181	14.2
	1989-90	1,525	65	4.5
Tidewater	1986-87	7,853	—	—
	1987-88	8,511	658	8.4
	1988-89	9,235	724	8.5
	1989-90	10,705	1,470	15.9

Source: JLARC analysis of VCCS enrollment data.

suggest that new, part-time students may be a critical group whose volatility from semester to semester is reflected in enrollment fluctuation. The VCCS should continue to study the factors affecting trends in individual college enrollments to better plan and manage resources.

Recommendation (15). **The Virginia Community College System should continue to study individual college enrollment trends so as to better plan and manage resources. Studies should focus on understanding enrollment decisions of highly volatile groups such as new part-time students. These activities should be conducted on an on-going basis by the appropriate system office personnel in cooperation with the colleges.**

VCCS Internal Budget Allocation

The State Board allocates appropriated resources to each of the 23 colleges using a mathematical resource allocation model. Upon receipt of their allocations, college presidents have substantial discretion concerning how to spend their budget, as long as annual spending remains within the dollar and position allocation set by the State Board.

Each college receives its total allocation amount along with a detailed explanation, in a line item format, of how positions and funds were derived. One line item within the model — equipment — is inaccurately labeled. The line item labeled equipment is actually a balancing adjustment to the college's total allocation. A balancing adjustment is necessary to ensure that the sum of all line items for the system has not exceeded position and dollar limits of the Appropriations Act. The VCCS internal allocation model is needlessly complicated by labeling the balancing adjustment as equipment.

Recommendation (16). **Prior to calculating future allocations, the budget section of the system office should re-label the equipment line item within the Virginia Community College System internal resource allocation model to clearly identify the line item as a balancing adjustment.**

Student Fees Paid to Third Party Providers

The community colleges conduct a number of off-campus courses in which a third party provides both the instruction and the facilities. For example, Northern Virginia Community College offers flight training courses at an airport, with instruction provided by a private firm. Also, many colleges offer physical education courses through third parties such as ski resorts and health clubs. Instruction is provided by staff of these organizations. In these situations, staff from the outside organization are hired as part-time faculty by the community colleges.

These kinds of arrangements are common in higher education, especially in the health fields. For example, clinical nursing courses are offered at local hospital facilities, where hospital staff provide instruction. In many instances, these arrangements allow the students access to resources which would be otherwise unavailable.

In most cases, the costs of instruction, equipment, and facilities are covered by the students' tuition as well as by State general funds administered by the VCCS. However, some community colleges have implemented a practice whereby students pay a special fee to the third party provider in addition to paying tuition to the college.

> *Students in their first semester of the airframe power plant program at J. Sargeant Reynolds and at Tidewater pay $360 in tuition to the college and over $600 in program fees to an independent contractor.*

The fees are used to cover the costs of equipment and facilities, while tuition is used to pay the part-time faculty.

In the 1989-90 academic year, Tidewater enrolled 190 FTE students in the program. Tidewater appears to have received over $500,000 in State general funds based on the system's average general fund appropriation per FTE student. J. Sargeant Reynolds enrolled 110 FTE students in the 1989-90 academic year. J. Sargeant Reynolds appears to have received $300,000 in State general funds.

* * *

In addition to tuition, students in the flight training courses at Northern Virginia Community College pay over $2,000 per course in program fees to an independent contractor. These fees are used to cover the costs associated with 32 hours of flight training.

In the 1989-90 academic year, Northern Virginia enrolled one FTE student in flight training courses. Northern Virginia appears to have received $2,700 in State general funds.

The community colleges have a financial incentive to offer these types of courses. For in-State students, the colleges collect tuition from the student as well as the general fund contribution from the Commonwealth. By using a third-party fee, the colleges can reduce the total cost of the program to the institution, and also avoid having to raise tuition to meet costs. In cases when tuition and general fund revenues exceed the college's expenses for a course, the college can profit from the use of a third-party fee. In these cases, it is in the financial interest of the college to build FTE-student enrollments in the course.

However, the practice of requiring students to pay fees to third party providers appears to be inconsistent with the intent of the State Board's position regarding fees. The policy, as stated in the section 4.3.1 VCCS Policy Manual, is:

> The VCCS mission includes the concepts of economic and geographic accessibility. Consistent with this commitment, efforts are made to set the tuition rate at a level which shall provide for economic accessibility and generate the non-general funds portion of the budget as required by the General Assembly. To help maintain economic accessibility, fines and fees are not viewed as sources of operating revenue. The primary purpose of fines and fees is to serve as a means of encouraging compliance with appropriate efficiency and effectiveness considerations.

The policy statement goes on to list five types of allowable fees, including non-credit education and public service fees, standardized test fees, student activity fees, auxiliary service fees, and miscellaneous fees such as for transcripts and late registration.

Under the current wording of the policy, colleges which require students to pay fees to third party providers are not explicitly violating policy. Technically, the fees are not used as operating revenue by the colleges. However, the colleges involved appear to be violating the intent of State Board policy. The fees are in fact used to cover the operating expenses of the courses, and may be a barrier to economic access as well.

Several steps should be taken to reassess this area and ensure consistent and appropriate practices across the system. The Chancellor should first collect and provide complete information to the State Board regarding student fee practices throughout the system. This information should include the amount of fees paid directly to the college and the amount paid to third parties.

The State Board should use this information to decide whether current practices are consistent with State Board intent with respect to student fees. The State Board should specifically address payment of fees to third party providers of courses. If the State Board decides that fees to cover operating expenses are reasonable in some instances (just as current policy allows five other types of fees), State Board policy should specify conditions or criteria under which such fees will be allowable. If payment of fees under certain conditions is deemed appropriate, policy should specify that these fees must be specifically approved by the State Board.

Recommendation (17). **The State Board for Community Colleges should assess current practice with regard to student fees used to cover operating expenses. In conducting the assessment, the State Board should recognize that the practice of requiring students to pay fees to third party providers: (1) does not appear to be consistent with State Board policy, and (2) fails to recognize the total operating costs of certain programs and courses for which the Virginia Community College System receives State appropriations.**

After the collection of complete information on current practices throughout the system, the State Board should decide whether operating fees are allowable in some instances, and modify policy to specify conditions under which such fees will be allowed. Policy should also require that no operating fees should be charged to students without the specific authorization of the State Board, regardless of whether the fee is paid to a community college or another entity.

Compliance with Procurement Requirements

The Department of General Services (DGS) evaluates whether the VCCS is in compliance with the Public Procurement Act (PPA) by conducting reviews of each college every three to four years. Based upon their most recent evaluations, DGS personnel indicated that most colleges are complying with the PPA. However, J. Sargeant Reynolds and Northern Virginia were identified as colleges which needed to take immediate steps to correct procurement problems.

In its May 1989 review of J. Sargeant Reynolds, DGS found violations of the PPA as well as inefficient procurement operations. Several types of violations were occurring on a routine basis, including a lack of written determinations to support sole source and emergency purchases, inattention to purchasing procedures for obtaining services, missing price reasonableness determinations in single source purchase programs, a disregard of the requirement to announce procurements over $5,000 in the Virginia Business Opportunities publication, and contract files that were in disarray.

DGS suggested three major recommendations to assist the college in correcting its procurement problems. First, J. Sargeant Reynolds should establish a clear internal policy, publicize it throughout the college, and enforce it through the use of a standard requisition. Second, purchasing office personnel should concentrate on purchasing matters only. Third, expiration files should be established for all service contracts.

* * *

DGS's review of Northern Virginia in May 1989 identified serious problems in the procurement function encompassing goods, services, and library purchases. The college had procurement files without adequate documentation, contracts established via competitive negotiation without the required written determination, contracts without evidence of competitive bidding, transactions without the proper number of vendors solicited, purchases over $1,000 that were transacted without a written purchase order, and library procurements that were made without benefit of competition.

DGS suggested that Northern Virginia take several steps to correct procurement deficiencies. First, the purchasing office at Northern Virginia should hire additional personnel. In addition, several positions warranted reclassification to reflect changes in college purchasing responsibility. Second, policies and procedures governing procurement at the college should be revised and decentralized. Third, the college should establish central files for all contractual documents which will alert the purchasing department when a contract is due to expire.

Staff from J. Sargeant Reynolds and Northern Virginia were interviewed with respect to the current status of their procurement activities. The dean of finance and administration at J. Sargeant Reynolds reported that changes in college procurement policies have been made since the 1989 DGS review. A purchasing guide which includes sections on purchase authority and approvals, ordering goods and services, receipt of goods, violation of procedures, ordering warehouse stock, resolution of purchasing problems, and a listing of college personnel responsible for purchasing was

produced in November 1989. Training sessions were held at each campus to provide detailed information on correct purchasing procedures. The college also devised a standard internal purchase requisition form for all purchases.

The director of fiscal and auxiliary services for Northern Virginia reported that purchasing for the college has been decentralized since the 1989 DGS review. Purchasing workshops have been held at each campus to illustrate correct purchasing procedures. The college requested additional staff at higher grade levels to attract purchasing specialists, but has not received approval from the system office and Department of Personnel and Training for all of the upgrades requested.

The community colleges should continue following DGS recommendations for improved college procurement. Also, the Chancellor should periodically review the progress of colleges cited for deficiencies by DGS.

IV. Curriculum Management

As a single institution of higher education, the Virginia Community College System (VCCS) has a responsibility to offer a curriculum of consistently high quality to students at all community colleges. In order to ensure the consistency of program requirements across colleges, it is important for the system office to evaluate and approve new program proposals. The system must also discontinue or restructure unproductive programs so that resources can be directed toward programs in demand. At the same time, the system office and the colleges are responsible for assuring that the content and structure of credit courses are in keeping with accepted norms in higher education. This is important to ensure that colleges do not offer essentially non-credit courses for credit, thereby generating additional full-time-equivalent (FTE) student enrollments and the accompanying general fund revenues.

An assessment of the program oversight function in the VCCS indicated that the system does a satisfactory job of ensuring that programs are pre-approved, although more attention should be paid to career studies programs. The VCCS has attained a high level of productivity in associate degree programs. However, the productivity of a number of certificate and diploma programs is questionable, and the VCCS should improve its oversight of these programs.

The review also determined that the VCCS needs to address two additional areas. First, oversight of credit courses versus non-credit courses should be strengthened. Requiring particularly close scrutiny is the appropriateness and implementation of the fractional credit course policy of the State Board for Community Colleges. Second, oversight of off-campus instruction should be improved.

PROGRAM APPROVAL AND PRODUCTIVITY

The VCCS offers three types of program awards: the associate degree, the diploma, and the certificate. The associate degree program is a planned program of study composed of a minimum of 65 semester hours at the 100 and 200 course levels culminating in a degree. Associate degrees are offered in all college transfer programs and in a number of occupational technical programs.

A diploma program is defined as a two-year curriculum with a major in an occupational area. A certificate program is defined as a curriculum that consists of a minimum of 30 semester credit hours with a major in an occupational area. Diploma and certificate programs are different from the associate degree programs in that they may not require courses at the 200 level, and usually require less general education than the associate degree programs. Career studies certificates are a special type of certificate which require less than one year of study in an occupational area, and no general education coursework.

The VCCS currently offers over 600 associate degree, diploma, and certificate programs across the system (Appendix I). Associate degrees are offered in college transfer programs such as liberal arts, business administration, general studies, and engineering. Associate degrees, diplomas, and certificates may be offered in a variety of occupational-technical program areas including agriculture and natural resource technology, arts design technology, business technology, engineering and industrial technology, health technology, and public services technology.

In an attempt to determine whether colleges might be offering programs without the required approval of the Chancellor and the State Board, pre-approval documentation was reviewed for a random sample of certificate and diploma programs. Documentation was adequate for all programs except for two career studies options at one college. The community colleges need to comply with the system policy that career studies options be pre-approved by the Chancellor.

Only one percent of VCCS associate degree programs were discontinued during the most recent State Council of Higher Education for Virginia (SCHEV) review. However, nearly half of the certificate and diploma programs reviewed during this study failed to meet productivity screening criteria. These programs should be subjected to further needs assessment to determine whether they should be discontinued.

The VCCS needs a central source of information on program approval and productivity. Currently, the central source of approval information is a paper file, and there is no central source of productivity information. The VCCS could benefit from a network computer application for tracking a variety of program information. This need will be discussed further in Chapter VII.

Program Approval

The instructional programs and student services section of the system office is responsible for coordinating new program requests and monitoring the curricular offerings of the 23 colleges. JLARC staff reviewed the approval status for a random sample of 45 diploma, certificate, and career studies programs selected from the entire system. Instructional programs and student services staff were asked to provide evidence that each program had been approved by the Chancellor and the State Board. In 40 cases, original program approval forms contained the appropriate program description and the necessary signatures for approval.

In three cases, the program was approved under a blanket arrangement upon the entry of the college into the system. In these cases, the programs were offered by technical institutions prior to their entry into the VCCS, and were maintained in the curriculum after the transition. In two cases at Paul D. Camp, approval documentation was not available for career studies options in bookkeeping and child care. The prior approval of the Chancellor is required for career studies options and this had not been obtained at the time of the review. Although the overall performance of the

program review function is generally good, it is important for the Chancellor and the system office to be aware of all career studies options in order to ensure consistent content of similar programs across the system.

Recommendation (18). **Community colleges should comply with section 5.3.0 of the Virginia Community College System Policy Manual requiring that all career studies options be approved by the Chancellor. The instructional programs and student services section of the system office should improve its monitoring of compliance with this policy.**

Program Productivity

In Virginia, the productivity of higher education programs has traditionally been assessed in terms of the number of graduates and the number of FTE students being served annually in individual programs. While SCHEV routinely reviews the productivity of associate degree programs, neither SCHEV nor the VCCS regularly reviews the productivity of certificate and diploma programs offered in the system. The VCCS offers approximately 280 certificate and diploma programs, representing more than 40 percent of the total number of programs offered by the VCCS.

Associate Degree Programs. SCHEV is mandated by statute to review degree programs and to discontinue unproductive programs. SCHEV conducts these reviews every two years for the VCCS. There are three levels of assessment used in the review of community college programs. First, there must be a minimum average number of graduates from a program over a five-year period. College transfer programs must have an average of at least 12.5 FTE student majors per year. Occupational technical programs must have an average of at least 17.5 FTE student majors per year. Second, there must be a minimum average number of FTE students majoring in the program over the same five-year period. College transfer programs must average at least ten graduates per year, while occupational-technical programs must average at least seven graduates per year.

If a program does not produce the minimum number of graduates and enrollments required, the program is subjected to a third level of assessment, which is a qualitative review of the program by SCHEV and the VCCS. During this phase, the VCCS is given the opportunity to justify the program by virtue of the need for the program in the community. The VCCS can also present plans for increasing the productivity of the program. If the VCCS is unable to justify the program to SCHEV during this phase of the review, the program is discontinued.

In its most recent review of the VCCS, SCHEV evaluated the productivity of VCCS associate degree programs for the period 1983 through 1988. Of the 301 programs evaluated, ten failed to meet SCHEV's minimum standards for graduates and enrollments. SCHEV staff met with VCCS representatives to discuss the need for these programs and any plans for improving productivity. Ultimately, three programs, or one percent of the total, were discontinued.

SCHEV staff have been generally satisfied with the actions of the VCCS in response to program reviews. Since 1986, the VCCS has cancelled 12 degree programs and two degree program majors. SCHEV staff state that the VCCS has achieved commendable productivity in its associate degree programs.

Certificate and Diploma Programs. The JLARC review of certificate and diploma programs focused on diploma programs not associated with degrees, and certificate programs not associated with diplomas or degrees. It is important for these programs to be productive because they tend to consume more instructional resources than those programs which are offered as part of a progression to a higher award.

For instance, the VCCS might not conserve resources by cancelling a certificate program in a major area which also offers the associate degree. Even though the certificate program may be cancelled, many of the core courses for the certificate would still be offered for students in the degree program. By contrast, if an independent certificate program is cancelled, there is a greater chance that required courses for the program will be cancelled as well. As a result, instructional resources are likely to be conserved by discontinuing the program. With these factors in mind, career studies programs were excluded from the review because virtually all of these programs are offered in conjunction with a higher award.

There are no productivity criteria established specifically for certificate and diploma programs. In 1985, SCHEV was directed by the General Assembly to do a special, one-time study of program productivity in the VCCS including certificate and diploma programs. In this review, SCHEV applied the criteria used for occupational degree programs, which are an average of seven graduates and 17.5 FTE students majoring in the program for a five-year period.

There are three factors which must be considered before applying these criteria to certificate and diploma programs. First, diploma and certificate programs differ from occupational degree programs in that they tend to include more hands-on laboratory and shop time and less general education. Laboratory and shop courses tend to have lower student-to-faculty ratios than general education courses. Therefore, core courses in these programs tend to generate fewer student credit hours and thus fewer FTE students than associate degree programs. In its response to the 1985 SCHEV review, the VCCS suggested that the criteria for FTE student enrollments in certificate and diploma programs ought not to exceed 75 percent of criteria for occupational degree programs.

Second, the number of graduates in diploma and certificate programs can be a misleading measure of productivity. According to the VCCS, many students take only a few courses in a program and find employment prior to graduating. Still others attend part-time and may take a number of years to graduate from a program. Considering these factors, enrollments should take precedence over graduates in the evaluation of diploma and certificate programs.

Third, certificate programs are often offered in conjunction with an associate degree or diploma program. In these situations, few if any courses are offered specifically for the certificate alone. Certificates offered in conjunction with diploma or degree programs need not meet rigorous productivity criteria, provided that the terminal diploma or degree program is productive.

Considering these factors, and in the absence of consensus on alternative standards, a modification of the SCHEV approach was used for the evaluation of certificate and diploma program productivity. The JLARC review focused primarily on those certificate and diploma programs which were not offered in conjunction with an occupational degree program. As suggested by the VCCS, program enrollments were evaluated according to 75 percent of the SCHEV criteria, or 13.1 FTE students. Data for the review were developed from three years of enrollment and graduate data provided by the colleges. Average FTE student enrollments for the three years were calculated by summing the number of FTE student majors in the Fall semester of each year and dividing by three. The average number of graduates for the three-year period was calculated by summing the number of graduates in all semesters for each year and dividing by three.

The colleges reported information on 280 certificate and diploma programs offered in the 1988-89 academic year (Table 15). Based on a review of college catalogs and the VCCS program guide, 193 of these programs were offered in conjunction with a degree or diploma program, and 87 programs were offered independently. Forty-two of the independent programs (48 percent) failed to meet either of the productivity screening criteria (Table 15, Table 16). Welding programs at six different colleges failed to meet the screening criteria.

The VCCS should further examine the programs which failed to meet the productivity screening criteria to determine whether the local need for the programs justifies their continuation, or if the productivity of the programs can be improved. Programs which are not justified in this phase of the review should be discontinued.

Although certificate and diploma programs have certain unique characteristics which do not lend themselves to traditional productivity measurement, the VCCS does not maintain any alternative criteria for certificate and diploma programs. Internal criteria could help the system and the colleges to screen programs for which demand may be decreasing. These programs could then be subjected to a more qualitative needs assessment by college and system personnel. Also, a systemwide perspective on program productivity would help the system office and the colleges identify opportunities for cooperative efforts between colleges. Colleges which offer similar programs with low productivity could cooperate to offer programs on a regional basis. In order to conserve resources and to gauge the demand for its programs, the VCCS needs to establish productivity criteria for certificate and diploma programs, and to review these programs on a regular basis.

Recommendation (19). **The Virginia Community College System Chancellor should subject all certificate and diploma programs identified as hav-**

Table 15

Number of Independent Certificate and Diploma Programs Which Failed to Meet Productivity Screening Criteria

	Number of Active Certificate & Diploma Programs	Number of Independent Programs	Number of Independent Programs which Failed to Meet Criteria
Blue Ridge	9	4	3
Central Virginia	12	5	2
Dabney S. Lancaster	9	4	4
Danville	18	14	5
Eastern Shore	1	0	0
Germanna	2	0	0
J. Sargeant Reynolds	24	8	6
John Tyler	8	3	2
Lord Fairfax	2	1	1
Mountain Empire	5	3	0
New River	20	5	2
Northern Virginia	33	1	1
Patrick Henry	10	2	1
Paul D. Camp	6	4	3
Piedmont Virginia	3	1	1
Rappahannock	7	1	1
Southside Virginia	12	2	1
Southwest Virginia	15	9	2
Thomas Nelson	19	3	1
Tidewater	35	10	4
Virginia Highlands	9	3	0
Virginia Western	12	3	2
Wytheville	9	1	0
VCCS	280	87	42

Source: 1989 JLARC survey of community colleges.

Table 16

List of Independent Certificate and Diploma Programs Which Failed to Meet Productivity Screening Criteria

Key: C = certificate D = diploma program

College	Program Title	Program Type
Blue Ridge	Auto Analysis and Repair	D
	Diesel Mechanics	C
	Word Processing	C
Central Virginia	Auto Diagnosis	C
	Child Care	C
Danville	Appliance Servicing	C
	Child Care and Social Work	C
	Industrial Electrical Principles	C
	Industrial Electronic Principles	C
	Quality Control	C
Dabney S. Lancaster	Banking	C
	Heavy Equipment	C
	Office Management	C
	Welding	C
J. Sargeant Reynolds	Interpreting Services	D
	Auto Mechanics	C
	Carpentry	C
	Dental Assistant	C
	Diesel Mechanics	C
	Small Animal Care	C
John Tyler	Machine Shop	C
	Welding	C
Lord Fairfax	Drafting	C
New River	Sign Communication	D
	Welding	C
Northern Virginia	Welding	C
Patrick Henry	Drafting	C
Paul D. Camp	Electricity	C
	Teacher Aid	C
	Welding	C
Piedmont Virginia	Arts & Crafts Production	C
Rappahannock	Law Enforcement	C
Southside Virginia	Industrial Services Technology	D
Southwest Virginia	Arts & Crafts	C
	Legal Assistant	C
Thomas Nelson	Machine Tool	D
Tidewater	Agriculture Industrial	C
	Dietetic Assistant	C
	Furniture Reconditioning	C
	Woodworking	C
Virginia Western	Legal Assistant	C
	Welding	C

Source: 1989 JLARC survey of community colleges.

ing failed to meet productivity screening criteria to further evaluation. If these programs cannot be justified in terms of local need or plans for improving productivity, the programs should be discontinued so that resources can be targeted toward programs in greater demand.

Recommendation (20). **The Virginia Community College System Chancellor should establish productivity standards for certificate programs which are not offered in conjunction with diploma or degree programs, and for diploma programs which are not offered in conjunction with degree programs. All such programs should be reviewed with regard to these standards every two years.**

OVERSIGHT OF CREDIT COURSES

In order to ensure the adequacy and consistency of instruction across colleges, it is important for the VCCS to approve credit courses centrally before they are offered to the public. Credit courses must be worthy of college credit, and the amount of credit must be commensurate with the amount of instruction provided. If courses do not meet these standards, then the quality of education is questionable.

The evidence shows that the VCCS has done an adequate job of monitoring most, but not all, credit courses. It appears that most credit courses have been pre-approved at the system level as required. It also appears that the colleges provide a sufficient amount of instruction to justify the number of credit hours associated with courses. However, general usage courses are not given adequate oversight. Also, monitoring of course contact hours is not completely adequate.

Course Approval

All credit courses must be approved by the system office before being offered to the public. New courses are proposed by the colleges using a course approval form which is signed by the college president and sent to the instructional programs staff at the system office. The instructional programs staff are responsible for approval. Once a program has been approved, it is listed in the VCCS Curriculum Guide, which is maintained centrally. In order to be approved, a course must have an acceptable description and an appropriate correspondence between contact hours and credit hours. Also, the course must be a requirement or elective for a particular program. Courses are purged from the Curriculum Guide when they have not been offered for a three-year period.

Given the large number of courses offered in the VCCS (more than 4,000 are listed in the Curriculum Guide), it was not possible to review every course. However, a number of fractional credit and one-credit courses were reviewed to determine if they had been pre-approved. Because these courses are short in length, they are more at

risk for being offered on an ad hoc basis without system level approval. More specifically, the following courses were reviewed: fractional credit course sections listed in the published college course schedules in spring 1989; one-credit course sections, other than physical education and laboratory courses, listed in the published college course schedules in spring 1989; and one-credit and fractional-credit courses offered as special training courses during the 1988-89 academic year. In all, 848 fractional credit course sections and 1,426 one-credit course sections were reviewed for a total of 2,274.

Technically, all of the course sections reviewed were found to be listed in the Curriculum Guide, indicating that the courses had been approved. However, the VCCS offers a substantial number of general usage course sections — over 3,000 in Spring 1990. These courses, though they are listed in the Curriculum Guide, allow the colleges to offer short seminars, supervised study, and topical courses without system-level approval of specific course content (Exhibit 2). A number of general usage courses are offered as one-day seminars for fractional credit. A primary reason for creating general usage courses was to conserve administrative resources in the system. The VCCS felt it would be overly time-consuming and laborious for the system office to approve hundreds of general usage courses for specific inclusion in the Curriculum Guide.

However, because these courses are not specifically pre-approved at the system level, it is important for the VCCS to monitor the integrity of general usage courses. The internal auditor should include a review of general usage course sections as part of the academic integrity audit. The review should determine whether general usage courses meet the same standards for credit instruction as those courses which are specifically pre-approved at the system level.

One mechanism for ensuring the integrity of credit instruction would be a set of standards which must be met if degree credit is to be awarded for a course. However, neither the VCCS Policy Manual nor the Curriculum Guide contains criteria for the awarding of degree credit for a course. When asked on the college survey to describe the criteria used at their college, presidents and deans gave a variety of responses, indicating a lack of commonly utilized criteria. Without such criteria, it is difficult to evaluate whether non-traditional courses are worthy of credit.

The Southern Association of Colleges and Schools (SACS) has established general standards for credit instruction which the VCCS must meet (Exhibit 3). SACS criteria for concentrated or abbreviated courses are particularly important in the assessment of fractional credit courses. In addition to the SACS guidelines, the VCCS requires that a course be a requirement or elective for a program, and that there be a rough equivalency between contact hours and credit hours. SCHEV academic programs staff add that a credit course should involve a substantive student evaluation and require a grade, in addition to the characteristics already described. The VCCS should consider these different perspectives in developing formal criteria for classifying courses for credit.

Exhibit 2

VCCS Policy on General Usage Courses

"The following general usage courses apply to multiple curricula and all prefix sections. The titles and descriptions are generally applicable for such use. However, colleges may elect to substitute different, but essentially equivalent, titles (e.g. Field Experiences in lieu of Coordinated Internship) to satisfy the preferences of respective professional fields or disciplines. Similarly, the course description may be restructured for adaptation to appropriate context or to a more specialized applicability (e.g. health agencies/facilities or hospitals in lieu of business, industrial and service firms)."

"...90, 190, 290 COORDINATED PRACTICE IN (Insert Appropriate Discipline)..."

"...90, 190, 290 COORDINATED INTERNSHIP IN (Insert Appropriate Discipline)..."

"...95, 195, 295 TOPICS IN (Insert Appropriate Topic)..."

"...96, 196, 296 ON-SITE TRAINING IN (Insert Appropriate Discipline)..."

"...97, 197, 297 COOPERATIVE EDUCATION IN (Insert Appropriate Discipline)..."

"...98, 198, 298 SEMINAR AND PROJECT IN (Insert Appropriate Discipline)..."

"...99, 199, 299 SUPERVISED STUDY IN (Insert Appropriate Discipline)..."

Source: VCCS Curriculum Guide, 1989.

Recommendation (21). **The State Board for Community Colleges should establish formal criteria for defining and distinguishing between credit courses and non-credit courses. In developing the criteria, the Virginia Community College System (VCCS) should consider criteria from the Southern Association of Colleges and Schools and the perspectives of State Council of Higher Education for Virginia academic programs staff, in addition to the perspectives of VCCS personnel. These criteria should be published in the VCCS Policy Manual.**

Recommendation (22). **The internal audit section of the system office should develop and implement procedures for auditing general usage courses. The audit should be designed to verify that general usage courses meet established criteria for credit instruction, and that these courses are of consistent content and structure across the system. General usage courses for fractional credits should be a special focus of the audit.**

Exhibit 3

Southern Association of Colleges and Schools Requirements for Credit Instruction

"Students and faculty must have a clear understanding of the goals and requirements of each course, the nature of the course content and the methods of evaluation to be employed. Methods of instruction must help fulfill the goals of each course and be appropriate to the capabilities of the students."

"Courses offered in concentrated or abbreviated time periods must be designed to ensure an opportunity for reflection and analysis of the subject matter. The institution must demonstrate that students completing these programs or courses have the opportunity to acquire comparable levels of knowledge and competencies as in similar programs offered in more traditional time periods."

Source: Criteria for Accreditation, Commission on Colleges, Southern Association of Colleges and Schools, 1988

Course Contact Hours

VCCS policy states that each semester hour of credit given for a course is based on approximately one academic hour (50 minutes) of formalized, structured instructional time in a particular course for 16 weeks. However, many VCCS courses are offered in a non-traditional format, for example as one-day seminars or intensive week-long courses. For the purpose of the review, a criterion of 800 minutes of lecture and/or examination time per one hour of credit was used.

All of the previously described course sections from academic year 1988-89 were reviewed for compliance with this criterion. All of the courses with specific meeting times were found to have an adequate number of contact hours for the amount of credit awarded based on the course schedule or on figures reported by the colleges (in the case of special training courses). However, 28 course sections were listed with meeting times to be announced later, and it was not possible to evaluate the adequacy of contact hours for these courses.

The method of reviewing published and reported contact hours is limited because it does not identify the actual amount of contact hours provided for a course. It is important for the VCCS to monitor actual contact hours in individual class sections, as the following case illustrates:

During the 1987-88 academic year, J. Sargeant Reynolds offered an eight-hour workshop for one credit. As the VCCS was still under the quarter system, eight hours was insufficient for the required ten hours of instruction required to award one credit. This problem was not discovered through an audit procedure, but rather through the report of a student in the course.

It was found that J. Sargeant Reynolds over-reported the number of FTE students generated by the course by 230, although SCHEV did not adjust official enrollment figures to account for this error. As a result, the VCCS was not penalized financially for this problem.

In order to reduce the risk of additional situations such as this, the VCCS should monitor course contact hours through its academic integrity audit program.

Recommendation (23). **The internal audit section of the system office should include an assessment of course contact hours as part of the academic integrity audit program. The assessment should encompass both publicized and unpublicized courses, with a particular focus on publicized courses with meeting times to be announced at a later date, and on courses offered in a non-traditional format. The review should include published course schedules, course descriptions, and interviews with instructors.**

FRACTIONAL CREDIT COURSES

The VCCS considers special training to be an important component of its economic development activities. Special training is not mentioned as a specific VCCS program area in the *Code of Virginia*. However, the General Assembly recognized the role of the VCCS in meeting the training needs of business and industry in House Joint Resolution No. 2 in 1986. This resolution, commending the VCCS on its twentieth anniversary, recognized the VCCS for its work in providing programs and services specifically designed for business and industry.

Fractional credit courses are a primary vehicle for meeting the training needs of business and industry. Fractional credits allow the community colleges to offer short training courses for less than one credit. Because credit courses for in-State students are funded primarily by the Commonwealth, the community colleges have a financial incentive to offer short courses for fractional credit as opposed to no credit. However, concerns have been raised about the appropriateness of fractional credit courses, and there is evidence that fractional credit courses would be offered on a non-credit basis if State funding were made available. Considering these factors, the appropriateness of fractional credit courses should be re-evaluated.

If a decision is made to continue the use of fractional credit courses, the VCCS should improve its monitoring of compliance with the fractional credit policy of the

State Board. Fractional credit courses are to be offered for less than one credit, and solely for business and industry. However, eight colleges have offered fractional credit courses to the general public, and one college has offered fractional credit courses for more than one credit.

Appropriateness of Fractional Credit Courses

State funding policies provide a clear incentive for the colleges to offer courses on a credit basis rather than on a non-credit basis. When a course is offered on a non-credit basis, the students must pay 100 percent of the direct cost of the course plus an additional 30 percent to cover overhead expenses. However, when a course is offered for credit, students pay the standard tuition rate. For in-State students, the standard tuition averages about 21 percent of the direct cost of the course, with the State financing the remainder.

In response to this incentive, the VCCS offers a number of short training courses for fractional credit as opposed to non-credit instruction. In academic year 1988-89, 21 colleges offered a total of 2,131 sections of fractional credit courses. Fractional credit courses generated 550 annual FTE students, about one percent of total FTE students in the system, consuming an estimated $1.6 million in State general fund revenues.

The VCCS appears to be the only public institution of higher education in Virginia which offers fractional credit courses. In interviews, SCHEV academic programs staff have expressed concern that fractional credits are used to acquire State funding for what should be non-credit continuing education courses. VCCS system office staff have expressed concern about the academic integrity of fractional credit courses as well, and would rather see these courses offered as funded non-credit instruction. In interviews, the VCCS presidents stated various opinions about fractional credit courses, but many presidents believe that if State funding were available for non-credit instruction, the use of fractional credits would diminish or disappear. A VCCS task force report on non-credit education proposed that if funding for non-credit instruction were initiated, all fractional credit courses would be changed to non-credit status.

This situation raises two concerns about fractional credits. First, it appears that students are receiving credit for courses which may not be worthy of credit. Second, the Commonwealth appears to be paying for instruction of an essentially non-credit nature, a practice which it has traditionally avoided. Given these concerns, the appropriateness of fractional credit courses should be evaluated. Because the primary motivation for using fractional credit courses is financial, alternative funding options for special training provided by the VCCS could be explored as well. Academic integrity and instructional funding are issues which potentially affect all of higher education in Virginia. Therefore, both SCHEV and the VCCS should be involved in the assessment of this issue.

There are three key questions which should be considered in the assessment of fractional credits. First, do fractional credit courses meet accepted standards for credit courses in Virginia higher education? Second, what would be the cost to the Commonwealth of alternative funding options for special training provided by the VCCS? Third, what would be the impact of alternative funding options on the demand for special training courses provided by the VCCS?

One funding option is to continue the current practice of funding many special training courses through the use of fractional credits. This option would perpetuate the practice of offering essentially non-credit courses for credit, and maintain State funding for these courses. This option would also maintain current costs to the consumer, and would probably maintain the current level of VCCS activity in special training.

A second option is to require the VCCS to offer all of its current fractional credit courses on a non-credit basis without State funding. This option would resolve questions about academic integrity while conserving State resources. However, this option may restrict the demand for special training activities conducted by the VCCS, depending on whether the market would bear the increased price of training.

A third option is to consider alternative State funding policies which would provide State support for specific training courses offered on a non-credit basis. This option would resolve the issue of academic integrity. The specific provisions of the funding policy would determine if the overall State support for VCCS special training activities would increase, decrease, or remain the same. This option would not allow State funding for all non-credit courses, but only those specifically designed to meet the training needs of business, industry, and government.

Recommendation (24). **The State Council of Higher Education for Virginia, in cooperation with the Virginia Community College System (VCCS), should conduct an evaluation of the fractional credit course policy of the VCCS. The evaluation should determine whether fractional credit courses are an acceptable vehicle for meeting the training needs of business, industry and government. If not, then alternative funding policies for funding short training courses for business, industry, and government should be examined. Findings and recommendations should be reported to the Secretary of Education by July 1, 1991.**

Fractional Credit Policy Violations

According to State Board policy, fractional credit courses are intended solely for business, industry, and government (Exhibit 4). However, some colleges appear to be violating the fractional credit policy in order to generate additional FTE student enrollments. In the 1988-89 academic year, eight colleges published fractional credit course offerings in the Spring 1989 course schedule, in effect offering them to the general public (Table 17). In doing so, these colleges increased their opportunity to generate FTE students from fractional credit courses. If a decision is made to continue

Exhibit 4

VCCS Policy on Fractional Credits

"The decimal semester hour option is solely intended to be applied in short courses offered for business, industry, and government. Decimal credit values may be applied only in the following increments: .25, .50, and .75 and may not exceed 1.00. The values can be applied to courses numbered 95, 195, 295 and those courses approved for variable credit of one hour or less."

Source: VCCS Policy Manual, section 5.4.2.3, August 1989.

Table 17

Colleges Offering Fractional Credit Courses to the General Public Spring Semester 1989

College	Number of Sections
J. Sargeant Reynolds	97
Virginia Western	57
Tidewater	26
John Tyler	6
Mountain Empire	4
Piedmont Virginia	3
Southside Virginia	2
Virginia Highlands	2

Source: JLARC analysis of community college course schedules, Spring semester 1989.

fractional credit courses, greater compliance must be achieved with regard to fractional credit policies.

In the Spring 1989 semester, J. Sargeant Reynolds offered 97 fractional credit course sections to the general public. The majority of these courses were offered through the center for business and industry and the center for office development. Most of the courses were offered in office automation and computing, for example "Introduction to Microcomputers" (.5 credits) and "Telephone Techniques" (.5 credits).

Other fractional credit courses not offered through the centers included "Home Vegetable Production" (.5 credits), "Floral Design for Novices" (.25 credits), and "Landscape Photography" (.5 credits).

Virginia Western offered 57 fractional credit course sections to the general public in Spring 1989. These included such courses as "Introduction to IBM PC" (.75 credits), "Word Processing" (.75 credits), and "Cardiopulmonary Resuscitation" (.5 credits). Tidewater offered 26 fractional credit course sections to the general public, including such courses as "Introduction to Personal Computers" (.25 credits).

In a separate violation, J. Sargeant Reynolds also offered two fractional credit course sections for 1.5 credits each in Spring 1989. These were Bus-95 "Train the Trainer," and OAD-111 "Shorthand Skill Review." These sections were offered in violation of the policy which limits fractional credit values to less than 1.0.

Recommendation (25). **If the State Board for Community Colleges decides to continue offering fractional credit courses, the State Board should enforce its policy on these courses by restricting fractional credit offerings to include only courses for less than one credit provided solely for business, industry, and government. The practice of community colleges offering fractional credit courses to the general public should be terminated, along with the practice of offering fractional credit courses for more than one credit.**

OVERSIGHT OF OFF-CAMPUS INSTRUCTION

The VCCS provides a significant amount of off-campus instruction in high schools, businesses, and other facilities. Unlike on-campus activities, these courses are often conducted without a college administrator on site. It is important for the colleges to monitor off-campus activities in order to ensure that all VCCS students receive high quality services and that administrative policies and procedures are followed. If this oversight is not carried out, instruction can suffer and State resources as well as consumer resources can be wasted. The VCCS has experienced problems supervising off-campus courses, and should take steps to make sure that these courses are administered appropriately.

The VCCS generally uses a number of practices and requirements directed toward assuring the quality of instruction throughout the system. Instructors must be hired by the college as part-time faculty in order to promote accountability. New hires must also meet the minimum educational and experiential requirements for all VCCS faculty, according to the discipline. Instructors should be evaluated by students and observed by administrators where possible to assure the quality of instruction. The curriculum must be designed by full-time faculty, and the course must have a logical relationship with an existing program. Finally, instructors should follow all administrative policies and procedures for administering the course, such as assigning grades and providing a sufficient number of contact hours.

The VCCS does have these types of controls in place. However, it can be difficult to enforce these controls in off-campus settings because classrooms are geographically removed from the main campus and instructors do not have daily contact with college administrators. As the VCCS has expanded its off-campus programs, problems have occurred because of a lack of adequate administrative oversight, as the following cases illustrate.

> *A part-time instructor at J. Sargeant Reynolds Community College began an aerobics class in Spring 1989 at the Powhatan Correctional Center and abruptly stopped attending without notifying the college administration. At the time, the college had no prison coordinator to alert them to the situation. The course was not completed until spring 1990. As a result, not all of the original students were able to complete the course.*
>
> * * *
>
> *The enrollment record review of a sample of spring 1989 students at Southwest Virginia Community College identified ten classes in which grades were never assigned to some or all students in the class. The record review occurred over six months after the classes had ended. The records coordinator explained that he has sent follow-up notices to the instructors and division chairmen but has received no reply. No action has been taken to remedy this problem.*
>
> * * *
>
> *From 1986 to 1990, Virginia Western Community College operated a prison education pre-release program in 40 correctional facilities in Virginia. The college offered credit to inmates who participate in the Virginia CARES program. Virginia CARES provides and evaluates the faculty for this program, although Virginia Western approves the credentials in order to certify them as part-time instructors. However, program instructors are Virginia CARES employees, are accountable only to Virginia CARES, and do not receive additional money for their instruction from Virginia Western. The curriculum for the inmate education program is co-designed but the college is too removed to provide oversight of instruction and to determine if the courses contain the appropriate number of contact hours.*

These cases indicate that off-campus activities require special administrative attention with regard to administrative policies and procedures, and oversight of curriculum and instruction. For this reason, the VCCS should develop and implement a policy aimed specifically at the management of off-campus activities. The policy should contain requirements for monitoring instructor attendance, monitoring compliance with administrative policies and procedures, and periodic, on-site supervision of instruction.

Recommendation (26). **The Virginia Community College System (VCCS) Chancellor should implement a policy on the management of off-campus instruction, with specific guidelines for on-site supervision of instruction, and for monitoring adherence to the administrative policies and procedures of the VCCS. The policy should specifically address the use of part-time faculty in off-campus settings.**

V. Academic Staff

The academic staff of a college is its single greatest resource. To the credit of the Virginia Community College System (VCCS), most full-time teaching faculty appear to have positive attitudes about their jobs. They are generally satisfied with such items as working conditions, workload, and administrative support. Although counselors generally feel that their function is understaffed, counselor morale is high and counselors are satisfied with the support they receive from college administrators. Students are generally satisfied with the quality of both instruction and counseling.

The VCCS, however, will face future challenges related to faculty recruiting. Enrollments are projected to grow over the next 15 years, and Virginia institutions will be expected to serve an increasing number of students. At the same time, a large number of faculty are expected to retire in the next two decades, and a shortage of highly qualified faculty is expected. This will make it more difficult for the VCCS to maintain a diverse, highly qualified faculty in the 21st century.

With regard to diversity, the VCCS has performed well in meeting its affirmative action hiring objectives. The VCCS, on its own initiative, has also set an additional goal related to faculty diversity — to develop a faculty which is representative of the diversity of the community. The system has made some progress toward this goal, but more improvement is needed. A number of colleges also report difficulties in recruiting qualified science and technical instructors.

Instruction

Instructional faculty are among the primary service providers in the VCCS. In addition to teaching, instructional faculty may perform a variety of tasks including student advising, curriculum development, and committee work (Appendix J). The typical teaching load is five courses per semester. Unlike faculty in four-year institutions, VCCS instructional faculty are not expected to do research.

The VCCS employs 1,938 full-time instructional faculty (Table 18). The VCCS employs a large number of part-time instructional faculty as well. In the fall 1989 semester, the community colleges employed 3,948 part-time faculty (Table 18). The average salary of instructional faculty in this semester was $34,167, based on the JLARC survey of faculty. Part-time faculty received from $324 to $666 per semester credit hour of instruction in 1989-90.

It appears that average faculty salaries for the VCCS reflect the national norm and exceed the norm for the southern region. The Southern Regional Education Board publishes national and regional faculty salary information for comprehensive two-year institutions. Comprehensive two-year institutions are those which offer

Table 18

Number of Instructional Faculty
Fall Semester, 1989

College	Full-Time	Part-Time
Blue Ridge	38	124
Central Virginia	62	137
Dabney S. Lancaster	32	59
Danville	57	94
Eastern Shore	16	18
Germanna	39	79
J. Sargeant Reynolds	131	357
John Tyler	63	153
Lord Fairfax	37	90
Mountain Empire	56	100
New River	61	125
Northern Virginia	509	894
Patrick Henry	35	64
Paul D. Camp	26	54
Piedmont Virginia	58	181
Rappahannock	22	90
Southside Virginia	51	125
Southwest Virginia	78	141
Thomas Nelson	97	209
Tidewater	265	481
Virginia Highlands	58	92
Virginia Western	101	185
Wytheville	46	96
VCCS	1,938	3,948

Source: Virginia Personnel Management Information System, and VCCS productivity analysis system.

associate degrees and college transfer courses. Within Virginia, this includes the community colleges as well as Richard Bland College. In FY 1989, the average faculty salary for Virginia's comprehensive two-year institutions was $32,444. This figure represented 109 percent of the southern regional average and 100 percent of the national average. Virginia ranked third among the 15 states in the southern region.

Based on the results of the JLARC faculty survey, VCCS instructional faculty are highly experienced. On average, instructional faculty have over 13 years of experience at their present college, indicating a low turnover rate. The average age of

instructional faculty is 46 years old. The VCCS anticipates that a large number of instructional faculty will retire in the next ten to 20 years.

Faculty are generally satisfied with their working conditions, based on the faculty survey. Eighty percent of those surveyed feel they have been assigned a reasonable workload. Sixty-eight percent feel they are compensated fairly for the work they do. Eighty percent are satisfied with the support they receive from administrators at their college. Twenty-six percent describe their overall morale as excellent, and 74 percent feel their morale is excellent or good.

Students are generally pleased with their educational experience. Twenty-two percent of those surveyed feel that their community college experience has exceeded their expectations, and 97 percent feel their experience has exceeded or met their expectations. Forty-six percent of students rate the quality of teaching as excellent, while 95 percent rate the quality of teaching as excellent or good. Sixty-seven percent of students feel that teachers are usually available outside of class, and 87 percent think teachers are usually or sometimes available.

Counseling

Colleges are required to maintain a staff of professional counselors to assist students in making decisions about career, educational, or personal situations (Appendix J). Counselors are an important resource for many students who may have been out of formal education for a long time, or who may have failed in earlier educational experiences. These students often need assistance to build their self-confidence as well as make academic and career decisions.

The community colleges employ 170 full-time counselors (Table 19). Twenty-five of these positions were grant-funded. The average salary for full-time counselors in the fall 1989 semester was $38,010. VCCS counselors provide a variety of services, including academic, career, and personal counseling.

Based on the JLARC counselor survey, counselor morale is generally good, although many feel counseling services need more resources. Most survey respondents (68 percent) believe counseling services at their college are understaffed, and about a third of the counselors surveyed believe they have been assigned an unreasonable workload. However, 78 percent believe they are compensated fairly for their work, and 74 percent are generally satisfied with the support they receive from administrators. Overall, over 80 percent of counselors surveyed describe their own morale as excellent or good. In open-ended comments, the primary concern of counselors was a lack of resources for student support services. The counselors stressed that student services play a vital role in community colleges because of the special needs of the population served.

Students are generally satisfied with the quality of counseling services. Twenty-one percent of students surveyed rate the quality of counseling services as

Table 19

Full-time Counselors
Fall Semester, 1989

College	Number
Blue Ridge	2
Central Virginia	3
Dabney S. Lancaster	3
Danville	5
Eastern Shore	3
Germanna	2
J. Sargeant Reynolds	17
John Tyler	[illegible]
Lord Fairfax	2
Mountain Empire	2
New River	6
Northern Virginia	46
Patrick Henry	3
Paul D. Camp	2
Piedmont Virginia	4
Rappahannock	7
Southside Virginia	8
Southwest Virginia	6
Thomas Nelson	8
Tidewater	21
Virginia Highlands	2
Virginia Western	8
Wytheville	4
VCCS	170

Note: Figures include both State-funded and grant-funded counselors.

Source: VCCS Personnel Management Information System data, Fall 1989.

excellent, and 66 percent rate counseling services as excellent or good. Few students (about three percent) have experienced problems getting counseling services. Over 50 percent of students surveyed have used counseling services in selecting programs and courses, while only 18 percent have discussed academic problems with a counselor.

In 1975, JLARC found that one-third of counselors surveyed had served at their present school for less than a year, and well over half had served for less than two years. This situation indicated high turnover in counseling services, depriving stu-

dents of continuity in counseling relationships. This problem has been resolved as the system has matured. In fall 1989, only 12 percent of counselors surveyed had been at their college for less than two years, and half of those surveyed had been at their college for at least eight years. The average experience at the present college for all counselors surveyed was over nine years, indicating an experienced counseling staff for the system.

The Virginia Plan

The Commission on the University of the 21st Century pointed out that the college-going rate of black high school graduates in Virginia has not changed appreciably in the last ten years. While a large proportion of women attend higher education, they are not well-represented in a number of disciplines, especially technical ones. In order to address these problems, it is important for female and minority students to have representative role models among the faculty at higher education institutions. Therefore, affirmative action recruiting is an important function for the VCCS.

A primary objective of the VCCS in the area of affirmative action, as with all public institutions of higher education in Virginia, is to comply with The Virginia Plan for Equal Opportunity in State-Supported Institutions of Higher Education. Under the plan, the community colleges set objectives for hiring minority faculty based on the availability of professionals qualified to teach in a community college. The VCCS has performed well in meeting and exceeding its hiring objectives under the plan.

In addition to meeting its hiring objectives under the Virginia plan, the VCCS generally reflects its community college peers in the diversity of instructional faculty. Fifty-seven percent of VCCS full-time faculty are male and 43 percent are female. According to national data reported by the American Association of Community and Junior Colleges National Commission on the Future of Community Colleges, in 1988 more than half of full-time faculty were male. Seven percent of VCCS instructional faculty are black, and two percent are Hispanic, Asian, American Indian, or Alaska native. According to the National Commission, in 1988 five percent of community college faculty were black and less than five percent were Hispanic.

Developing a Faculty Which Represents the Diversity of the Community

The VCCS has also set an additional, more ambitious recruiting goal for itself. In its long range plan, Toward the Year 2000, the VCCS set a goal of developing a faculty that "represents the ethnic and racial characteristics of the community." It appears that some colleges meet this goal, while others do not. In addition to addressing the ethnic and racial diversity of the community, the system should also strive to represent gender diversity as well.

As a system, the VCCS comes fairly close to achieving this goal for administrative faculty, although more progress is needed for instructional faculty. Viewing

the VCCS as a single institution of higher education serving all geographic areas of the State, the Commonwealth may be seen as the community of the VCCS. Estimates for Virginia's general population place the proportion of black citizens at about 19 percent of the total. Using State Council of Higher Education for Virginia data on the number of black faculty in public institutions, in 1988-89 an estimated 16 percent of VCCS administrative faculty and seven percent of instructional faculty were black. Estimates for the general population place the proportion of female citizens at about 51 percent. In 1988-89, an estimated 43 percent of instructional faculty and 41 percent of administrative faculty were female.

Focusing on selected individual institutions, these faculties reflect the racial diversity of their local communities to varying degrees (Table 20). One college was randomly selected from each of the six geographic regions of the State as defined by the VCCS in its long-range plan. The proportion of black faculty at each college was compared with the proportion of black citizens in the local service region, as derived from United States Bureau of the Census figures. Mountain Empire and New River closely reflected the population proportion of blacks among instructional faculty. J. Sargeant Reynolds and New River met or exceeded the population proportion of blacks among administrative faculty.

Table 20

Proportion of Black Faculty Compared to Proportion Of Black Population for Selected Community Colleges

	Blacks as a Percentage of Total		
College	Instruc. Faculty	Admin. Faculty	Service Region Population
Eastern Shore	0%	22%	40%
J. Sargeant Reynolds	13	48	32
Mountain Empire	3	0	1
New River	3	9	4
Piedmont Virginia	2	5	18
Southside Virginia	12	15	42
VCCS	7%	16%	19%*

* Statewide proportion

Source: State Council of Higher Education Report Card, 1989, and Virginia Statistical Abstract, 1989 Edition.

The long-range goal of the VCCS to be representative of the diversity of its community is commendable. However, the lack of minority and female higher education faculty is a national problem, and will not be easily solved. To ensure progress toward the VCCS goal, the Chancellor should direct the colleges to develop specific strategies for developing faculties which are representative of the racial and gender diversity of the community, in addition to their current practice of meeting hiring objectives under the Virginia Plan for Equal Opportunity in State-Supported Institutions of Higher Education.

Recommendation (27). **The Virginia Community College System Chancellor should direct the college presidents to develop specific strategies for developing faculties which are representative of the racial and gender diversity of the community.**

Recruitment of Science and Technology Faculty

The VCCS faces the additional challenge of maintaining an adequate corps of science and technical faculty into the 21st century. A number of college presidents have experienced difficulties recruiting faculty in the science and technology disciplines. This problem is likely to intensify as the VCCS faculty ages and society becomes increasingly technological.

In survey responses, administrators at 21 of the 23 community colleges reported problems recruiting full-time instructional faculty in technical and science areas. College administrators agree that it is particularly difficult to compete with private sector salaries for faculty in the health sciences, computer, and other technology areas, as illustrated by the following comments from the college survey:

> *(There is) difficulty in recruiting/retaining qualified faculty in allied health areas because of keen competition in the labor market.*
>
> *Health technology, engineering technology, computer related fields — academic salaries in (these) areas are not competitive with the private sector.*
>
> *Highly competitive salaries in the industrial sector diminish the effectiveness of recruiting in the technology areas.*

As the economy moves toward technology and service, the VCCS will likely face more competition from the private sector and other educational institutions in recruiting technical and science faculty. The VCCS should begin now to develop science and technology faculty for the mid-1990s.

While a range of options for recruiting science and technology faculty should be explored, full consideration should be given to the adoption of salary differentials for science and technology positions. This practice is routinely followed in senior institu-

tions as well as throughout government. However, the VCCS has traditionally set salaries on the basis of educational background and experience rather than discipline areas. Also, with current statewide forecasts projecting limited increases in general fund revenues, higher salaries for some will inevitably mean lower or stagnant salaries for others. Careful planning would be required before this type of option could be adopted.

Recommendation (28). **The Virginia Community College System Chancellor, in cooperation with the presidents, should study the full extent of the difficulties involved in recruiting science and technology faculty, project the system's need for science and technology faculty in the 21st century, and develop strategies for meeting those needs. Salary differentials for science and technology faculty should be among the strategies considered. Findings should be reported to the State Board for Community Colleges.**

VI. Partnerships

The Virginia Community College System (VCCS) has formed a number of alliances or partnerships with senior institutions, secondary schools, and the business community. In 1975, JLARC found that community colleges had made limited progress in developing articulation agreements with senior institutions. Articulation agreements define the extent to which credits earned from a community college are transferable to a senior institution, in an effort to assist community college students who are seeking the baccalaureate degree. Such agreements may result in lower educational expenditures for both individual students and the Commonwealth. Despite these potential savings, the status of systemwide articulation has not changed significantly since 1975. Although the General Assembly has expressed its intent for these agreements to be developed, relatively few articulation agreements exist between the VCCS and Virginia's senior institutions.

The VCCS has been successful in establishing partnership arrangements with secondary schools. Currently the primary partnerships with secondary schools are dual enrollment programs, general articulation agreements, and a unique arrangement developed in cooperation with local businesses titled the 2+2 program. The VCCS and the Department of Education (DOE) are pleased with the progress of these agreements, but little has been done to analyze the costs and impact of the programs.

In pursuit of the economic development component of its mission, the VCCS works with the business community through special training programs, the technology transfer program, and various local initiatives. In 1975, JLARC found management problems in the area of special training. Some of these problems were related to management policies and procedures in the Division of Industrial Development. However, this division has been transferred to the Department of Economic Development. The special training activities carried out by the VCCS today are therefore different than those outlined in the 1975 review.

College presidents are generally positive about the technology transfer program, although the program does not make substantial use of VCCS faculty resources. Several colleges have created centers for economic development which coordinate all of their economic development activities. This concept should be considered by all community colleges currently involved in economic development.

ARTICULATION AGREEMENTS WITH SENIOR INSTITUTIONS

The purpose of an articulation agreement is to facilitate an efficient transfer process for community college students seeking the baccalaureate degree. Articulation agreements define the extent to which credits earned from the community college are

transferable to the senior institution. However, articulation agreements do not guarantee students admission to a senior institution. They simply allow the student to transfer a pre-determined amount of credit to the senior institution if the student meets entrance requirements and is admitted.

The extent of articulation between senior institutions and community colleges has been a concern of the General Assembly in the past. To expedite the articulation process, the 1976 General Assembly in House Joint Resolution No. 17 requested that the State Council of Higher Education for Virginia (SCHEV) undertake steps to develop additional articulation agreements between the VCCS and public and private four-year colleges and universities.

The importance of articulation was also recognized by the Commission on the University of the 21st Century. Virginia's undergraduate enrollments are projected to increase over the next 15 years, and the VCCS will be expected to play a role in serving these students. The Commission on the University of the 21st Century unequivocally supported greater articulation between community colleges and senior institutions.

Articulation agreements may provide advantages for both the educational consumer and the Commonwealth. Clear articulation agreements allow students to feel confident that they will be able to transfer to a senior institution as a third year student after completing the associate degree, provided they meet the entrance requirements of the senior institution. In addition, the cost of a community college education is relatively inexpensive compared to the cost of the first two years at Virginia's senior institutions. As a result, a decision to complete the first two years of higher education at a community college rather than a senior institution can save money for both the educational consumer and the Commonwealth.

In 1975, the VCCS had one systemwide articulation agreement with a public senior institution, and JLARC recommended that more systemwide agreements be developed. Today, while there are a variety of agreements between individual community colleges and Virginia's senior institutions, there are only five systemwide articulation agreements with Virginia's senior institutions, and three of these involve public institutions of higher education. The VCCS would like to expand the number of systemwide agreements and has taken major steps to ease the way, but significant problems still exist.

Status of Current Agreements

There were 3,726 community college students who transferred to public senior institutions in the Commonwealth in Fall 1989 (Table 21). During the 1988-89 academic year, 33 senior institutions had formal articulation agreements with at least one community college, according to the 1989 JLARC survey of community colleges (Table 22). Nine of these agreements were with senior institutions from other states, and six of these agreements involved systemwide articulation. The VCCS has systemwide articulation agreements with two private Virginia institutions (Averett Col-

Table 21

Transfers From Virginia Community Colleges To Virginia Public Senior Institutions

Institution	Number of Students Transferring Fall 1988	Fall 1989
Christopher-Newport College	338	338
Clinch Valley College	66	62
George Mason University	786	895
James Madison University	165	165
Longwood College	78	154
Mary Washington College	48	51
Norfolk State University	134	129
Old Dominion University	423	444
Radford University	300	336
University of Virginia	116	146
Virginia Commonwealth University	477	619
Virginia Military Institute	7	9
VPI and SU	260	315
Virginia State University	14	51
College of William and Mary	10	12
Totals	3,222	3,726

Source: Fall 1988 SCHEV B-7 Report and Fall 1989 SCHEV B-7 Report, State Council of Higher Education for Virginia.

lege and Saint Paul's College), three public Virginia institutions (James Madison University, Longwood College, and Virginia State University), and Shepherd College of West Virginia.

The articulation agreements vary in their level of specificity. Some are one page documents providing broad guidelines for students interested in matriculating at a senior institution, while others are small handbooks that include detailed listings of all VCCS courses transferable to the receiving school. Most agreements provide information on the following subjects: whether or not an associate degree is required prior to transfer, minimum grade point average required for transfer, whether a transfer student would enter the senior institution as a junior, whether a transfer student would be eligible for financial aid at the senior institution, and the courses and programs acceptable for transfer.

Table 22

Senior Institutions With Formal Articulation Agreements With At Least One Community College

Senior Institutions in Virginia

Averett College
Bluefield College
Christopher Newport College
Clinch Valley College
College of William and Mary
Eastern Mennonite College
Emory and Henry College
Ferrum College
George Mason University
James Madison University
Longwood College
Lynchburg College
Mary Baldwin College
Mary Washington College
Norfolk State University
Old Dominion University
Radford University
Saint Paul's College
Shenandoah College and Conservatory of Music
Virginia Commonwealth University
Virginia Intermont College
Virginia Polytechnic Institute and State University
Virginia State University
Virginia Wesleyan College

Senior Institutions in Other States

Bluefield State College
Davis and Elkins College
King College
Lincoln Memorial University
Mars Hill College
Montreat-Anderson College
Shepherd College
University of Maryland, Eastern Shore
University of Rochester

Source: 1989 JLARC survey of community colleges.

Barriers to Articulation

The VCCS would like to increase the number of systemwide articulation agreements, and has taken major steps to make the articulation process proceed more smoothly. In 1988, the VCCS converted from the quarter system to the semester system used by the senior institutions, making it easier to compare community college courses to those at senior institutions. In February 1990, the VCCS released the report of its task force on general education, which outlines the components that should be included in the general education core at all community colleges. One reason for this initiative is to develop consistent content and quality in general education programs across the system, making it easier for senior institutions to evaluate the general education background of transfer applicants. The task force also recommended that a working group be created to re-examine course distribution requirements with respect to the new statements on general education. The working group was created and is currently focusing on this task.

However, the 1989 JLARC survey of community colleges indicated that the majority of VCCS presidents continue to experience difficulties forming articulation agreements with senior institutions. These difficulties can be traced to two main factors: a complex process for developing agreements, and a perception that senior institution administrators are suspicious of the quality of community college education.

Negotiating Articulation. Some senior institutions appear to refrain from participating in general articulation agreements because the specific requirements for transferring into a particular program at a senior institution may vary according to the major. In this situation, a number of deans and department heads may have to be consulted before an articulation agreement can be established for each major field of study. This involved process makes it difficult to negotiate articulation agreements.

Even though the process can be complex, three recently finalized agreements with James Madison University, Longwood College, and Virginia State University demonstrate that it can be accomplished. A key aspect of these agreements is that the general education preparation of VCCS students is accepted by the senior institution. The VCCS should continue its initiatives to negotiate additional systemwide agreements with the public senior institutions.

Perceptions of Quality. VCCS presidents and staff perceive that some senior institutions are hesitant about articulation, especially systemwide articulation, because of reservations about the quality of community college education. James Madison University and Virginia State University signed systemwide agreements with the VCCS during the 1989-90 academic year, and Longwood College signed a systemwide agreement with the VCCS in May of 1990. Representatives from James Madison University and Virginia State University confirmed that their confidence in the quality of VCCS education played a major factor in their decision to enter into systemwide agreements. They were convinced that associate degree programs did not vary significantly across the system In order for the VCCS to increase the number of articulation agreements, James Madison University and Virginia State University

personnel said the system office must show that associate degree graduates are prepared to enter senior institutions as upperclassmen.

The question of how well a student transferring from the VCCS will perform academically at a senior institution is one of the major issues that must be resolved before more articulation agreements can be developed. In support of the Commonwealth's student assessment initiative, SCHEV conducted a study in 1986 entitled "The Measurement of Student Achievement and the Assurance of Quality in Virginia Higher Education." One of the recommendations was that state-supported colleges and universities should submit annual progress reports on student achievement to SCHEV, including information about the achievement of transfer students from the VCCS. This recommendation, along with five others, was accepted by the 1986 General Assembly through Senate Joint Resolution No. 83.

Following the approval of Senate Joint Resolution No. 83, SCHEV developed student assessment guidelines in 1987 for all public institutions. Senior institutions are now required to provide reports on the academic progress of transfer students to SCHEV. Community colleges are expected to use this data from senior institutions as one component of their student assessment reports.

In the summer of 1989, community colleges developed their first student assessment reports as stipulated by the SCHEV guidelines. JLARC staff analyzed sections of the reports submitted by 12 community colleges. In these reports, community college administrators complained of difficulties in utilizing the data provided by some senior institutions, with the primary problem being a lack of a standard reporting format. It appears that some senior institutions provide useful information on VCCS transfer students that can assist community college administrators in determining the factors which contribute to academic success at senior institutions. However, data from other senior institutions has not been as useful. Selected schools have failed to furnish information that permits community colleges to identify individual students. Unless data are reported in this manner, community college administrators cannot track the overall performance and experience of former VCCS students at senior institutions.

Given the fact that Virginia has not made a great deal of progress in forming systemwide articulation agreements and the General Assembly has expressed its intent that such agreements be developed, SCHEV should increase its efforts as a facilitator between the VCCS and public institutions of higher education. Systemwide articulation agreements should be established between each public institution of higher education and the VCCS.

Recommendation (29). **The State Council of Higher Education for Virginia should increase its efforts as a facilitator between the Virginia Community College System and Virginia's public senior institutions with the goal of establishing formal systemwide articulation agreements with all public senior institutions in Virginia.**

Recommendation (30). **The State Council of Higher Education for Virginia, in cooperation with the Virginia Community College System (VCCS) and senior institutions, should: (1) establish a standard format for reporting student achievement data on former VCCS students and (2) establish a task force for the purpose of assessing the performance of former VCCS students in Virginia's senior institutions of higher education.**

PARTNERSHIPS WITH SECONDARY SCHOOLS

Community colleges and secondary schools have a long history of interaction. The VCCS first developed partnership agreements with local school divisions in 1966. These agreements expedited the sharing of facilities and permitted high school students to receive advanced placement credit. During the 1970s and early 1980s, a number of research projects were conducted throughout the state to develop coordinated curriculum materials between community colleges and local school districts offering similar programs.

Currently, the VCCS participates in dual enrollment programs, general articulation programs, and 2+2 programs with secondary schools. Through such arrangements, high school students are encouraged to pursue post-secondary education, businesses can have input into training programs for potential workers, and redundant coursework can be minimized at the associate degree level. Partnerships with secondary schools are highly regarded by both VCCS and Department of Education (DOE) personnel. However, the VCCS and DOE should conduct an analysis of the dual enrollment program during the 1990-91 academic year to determine the costs and impact of the program.

Dual Enrollment

The Virginia Plan for Dual Enrollment establishes procedures that permit secondary students to meet the requirements for high school graduation while simultaneously earning college credits. It was signed by the Secretary of Education, the Superintendent for Public Instruction and the community college Chancellor in Fall 1988. The purpose of the plan is "to provide a wider range of course options for high school students and to avoid the unnecessary duplication of programs in the academic, fine arts, and vocational subject areas where appropriate."

High school students can be enrolled in either regularly scheduled college courses, special college credit courses for high school students held at the high school, or special college credit courses for high school students held at the college. The 1989-90 academic year was the first full year of operation of the dual enrollment program. As of July 1989, dual enrollment agreements existed in 51 school divisions and 17 community colleges across the state. Approximately 4,700 secondary students partici-

pated in the program during its first year. Participating high school students pay the standard community college tuition per credit hour.

The former Secretary of Education decided that in order to provide the opportunity for dual enrollment, it would be necessary to allow both the school systems and the community colleges to receive their normal per-student funding from the Commonwealth. The public school receives average daily membership funding for its students who participate in the dual enrollment program, and the community college receives full-time-equivalent (FTE) student credit for each student who participates.

Neither DOE nor the VCCS has undertaken a comprehensive evaluation of the dual enrollment program. However, an estimate of the costs of these community college courses can be made. Assuming that each of the 4,700 high school students participating the first year took a three credit community college course, the Commonwealth spent approximately $1,375,000 to provide the college coursework. At the same time, the students' respective high schools received their regular average daily membership funding. The assumption that students will complete their post-secondary studies within a shorter time frame as a result of this college coursework is the primary DOE rationale for these expenditures.

The Virginia Plan for Dual Enrollment stipulated that all dual enrollment programs should include a formal mechanism for evaluation. Such an assessment has not been completed as yet, and the VCCS and DOE should either conduct or facilitate a comprehensive evaluation of the dual enrollment program. It appears that an assessment of program costs would be an important element of the evaluation.

Recommendation (31). **The Virginia Community College System and the Department of Education should conduct or facilitate an evaluation of the dual enrollment program, as stipulated in the Virginia Plan for Dual Enrollment. The evaluation should review the extent of duplicative funding which is occurring.**

General Articulation Agreements

In July 1989, there were 440 signed, general articulation agreements between secondary schools and community colleges. All of the community colleges have at least one agreement with a local school division. These agreements outline procedures for students to receive community college credit for work completed in high school.

Unlike dual enrollment programs, under general articulation agreements students do not attend high school and college simultaneously. Students complete high school and then enroll in a community college. Once they are enrolled at the college, students may receive college credit for courses taken previously in high school. As a result, students are able to begin their community college program without repeating coursework.

2+2 Programs

The Virginia 2+2 Program is nationally recognized as an innovative way of meeting the needs of business and industry at the local level. Due to the complexities of advanced-technology occupations, some firms require workers with more preparation than two years of secondary training can provide. The 2+2 approach was designed to meet these increased demands. These programs are developed in conjunction with representatives of business, industry, and government, and involve two years of secondary instruction followed by two years of post-secondary instruction. The training sequence includes academic classes as well as vocational education training, and is carefully coordinated to ensure that students do not repeat coursework.

Forty-one school divisions and six community colleges (Central Virginia, John Tyler, Lord Fairfax, Paul D. Camp, Southwest Virginia, and Thomas Nelson) were involved in nine 2+2 programs last year. DOE reported that $300,000 to $400,000 is spent each year in Virginia on 2+2 programs. These funds are provided through the Carl Perkins Vocational Act, a federal vocational education program. Each participating program receives approximately $20,000 a year for two years. These funds are used for curriculum development and administrative work.

The master technician program at Thomas Nelson was one of the first 2+2 programs initiated in the state. This program was formally implemented at the ninth grade level in fall 1986. Representatives from the public and private sectors collaborated to design the curriculum and to set policies for the operation of the project. The master technician curriculum combines academic courses, especially in science and mathematics, with technology courses at the secondary level. Secondary coursework includes two years of algebra, power and transportation, mechanical drawing, principles of technology, materials and processes, and electronics. Postsecondary coursework includes laser and fiber optics, microwaves, communications, digital logic circuits, introduction to computers, fluid mechanics and robotics. Through this program, the organizers envisioned creating a greater supply of systems-oriented workers capable of attaining academic excellence and economic self-sufficiency.

ECONOMIC DEVELOPMENT

The VCCS considers economic development to be an important part of its mission. The system does a considerable amount of special training for business and industry, and JLARC identified some management problems associated with special training in 1975. However, the Division of Industrial Training has been transferred to the Department of Economic Development since that time.

Another way the VCCS becomes involved in economic development is through the state's technology transfer program administered by the Center for Innovative Technology (CIT). Further, a number of community colleges have created local centers for coordinating economic development activities.

Special Training

The VCCS does a significant amount of special training for business, industry, and government. During the 1975 review, JLARC identified problems with the VCCS's special training program. These problems included inadequate policy making and review, unreliable records and erroneous reporting, doubtful assumptions regarding public benefit from the training, and failure to integrate training resources and opportunities throughout the community college system.

In 1985, the Division of Industrial Training was relocated to the Department of Economic Development. As a result of the relocation, the Department of Economic Development now administers the specially funded state training program which focuses on new and expanding industries.

Although no longer responsible for this specific program, the VCCS still provides other special training for business and industry. Special training clients who were surveyed are generally satisfied with the quality of training received from the VCCS. It also appears that record keeping for special training has improved over the years.

Special Training Activities. The VCCS devotes a significant amount of resources for the coordination and delivery of special training activities. In academic year 1988-89 alone, community colleges provided 2,223 special training courses for 380 clients. According to the 1989 JLARC survey of community colleges, nearly 36,800 individuals participated in these courses, generating 3,928 FTE students and $1,829,285 in tuition and fees.

There is great variety among the colleges in terms of the special training activities provided. The large urban colleges (J. Sargeant Reynolds, John Tyler, Northern Virginia, and Tidewater) had the most extensive programs (Table 23). Mountain Empire was the only college that did not provide special training activities during the 1988-89 academic year.

The VCCS and the Division of Industrial Training have different training missions. VCCS's special training programs are typically coordinated through the office of continuing education at each college. According to system office staff, colleges work with established businesses to upgrade the skills of current employees, and retrain unemployed workers so that they can secure employment in other occupations. The Division of Industrial Training serves firms new to Virginia as well as companies which are expanding their operations, and provides pre-employment training as well as on-the-job training.

VCCS special training courses may be for degree or non-degree credit. If the course involves degree credit, the college receives FTE student credit for all participants. Each participant is charged the standard community college tuition per credit hour for special training courses that award degree credit. In the case of non-credit special training courses, the client pays the full cost of the course plus an additional fee for overhead expenses.

Table 23

Special Training Activities, 1988-89 Academic Year

College	Number of Clients	Number of Courses	Individuals Served	Revenue from Client*
Blue Ridge	7	24	396	$ 19,944
Central Virginia	21	79	1,096	63,862
Dabney S. Lancaster	8	26	220	14,178
Danville	29	122	2,176	43,090
Eastern Shore	1	1	7	1,750
Germanna	8	21	357	18,414
J. Sargeant Reynolds	59	321	4,672	137,900
John Tyler	37	243	4,037	182,568
Lord Fairfax	2	7	90	6,123
Mountain Empire	0	0	0	0
New River	13	130	1,720	94,594
Northern Virginia	58	302	5,021	426,874
Patrick Henry	13	21	303	14,608
Paul D. Camp	9	23	283	12,968
Piedmont Virginia	16	81	980	3,594
Rappahannock	8	18	224	14,221
Southside Virginia	2	4	57	2,537
Southwest Virginia	3	13	274	15,205
Thomas Nelson	15	43	757	36,032
Tidewater	28	536	10,758	610,164
Virginia Highlands	2	5	71	7,554
Virginia Western	24	153	2,272	63,475
Wytheville	17	50	1,021	39,630
VCCS	380	2,223	36,792	$1,829,285

Note: In cases where the course involved credit, revenue represents tuition; in cases where the course was non-credit, revenue represents the actual cost of the course as well as a fee for overhead expenses.

Source: 1989 JLARC survey of community colleges.

Special training courses are conducted either at the college campus or at the place of business. These courses are taught by regular college faculty, or firm employees who have been hired as part-time college faculty. Community college personnel handle all of the paperwork associated with special training courses, and tuition is paid through the community college.

Transfer of the Division of Industrial Training. The Division of Industrial Training was transferred from the VCCS to the Department of Economic Development in 1985. College presidents and Division of Industrial Training personnel are generally positive about the current working relationship between the two entities.

The Division of Industrial Training sometimes recommends community college training to potential businesses as a means of attracting them to Virginia. According to Division of Industrial Training personnel, an estimated 15 percent of the 220 training programs sponsored by the Division in 1988 involved the VCCS. This involvement occurred in two forms: either the Division of Industrial Training provided funds for selected workers attending community college courses, or pre-employment training programs sponsored by the Division of Industrial Training were held in community college facilities.

Improved Recordkeeping. The second significant change since the 1975 study is improved recordkeeping by the VCCS, as revealed through a review of each college's special training records and a survey of firms that were the recipients of special training courses. Each college was asked to provide a detailed listing of all special training courses conducted during the 1988-89 academic year, including the title of each course, the start and end date of each course, the number of individuals taking each course, the amount of credit awarded for each course, the number of FTE students generated for each course, the cost of each course, and a contact name and phone number for each client served.

Information reported by the colleges was checked through a JLARC survey of special training clients in 1989 and found to be accurate. Only two clients reported minor discrepancies in information provided by the colleges. J. Sargeant Reynolds incorrectly reported the title of a training course, and John Tyler reported a two-day-course as one day in length.

Client Satisfaction. Seventy-eight special training clients were surveyed by telephone with regard to their satisfaction with the services received from community colleges. The special training clients were generally pleased with the program. Most clients (73 percent) paid the entire cost of the training for their employees, and 95 percent said the cost of the training was inexpensive or moderately priced. Ninety-nine percent of the firms surveyed said the content of the training and the instruction provided were adequate for the needs of their organization. All of the clients surveyed stated that they would recommend community college training services to other organizations, and all rated the quality of community college training as excellent or good.

Clients were given an opportunity to comment on the strengths and weaknesses of community college training during the survey. The majority of open-ended comments were positive. Ten firms remarked on the high quality of instruction; however, five firms expressed concerns about the quality of part-time faculty. Sixteen firms remarked that college personnel were very accessible and 14 remarked that courses were designed to meet their specialized training needs.

Technology Transfer Program

In 1987, the CIT began a three-year pilot program with the VCCS. The Higher Education Economic and Technology Development Program was designed to assist small and medium sized businesses. Funded by the state, this program houses CIT employees at nine community colleges across the state to solve the technology-related problems of local businesses. There is also a CIT technology transfer program affiliated with Halifax County in South Boston.

The community colleges with technology transfer programs are Central Virginia, New River, Northern Virginia, Paul D. Camp, Southwest Virginia, Tidewater, Thomas Nelson, Virginia Western, and Wytheville. For the first three years of the program, the CIT paid 80 percent of the salaries of each director and his secretary. In addition to providing 20 percent of the salaries, the VCCS also contributed office space and all overhead costs associated with running the program. In July 1990, CIT will be responsible for 89 percent of the salaries of all technology transfer employees, and the VCCS will finance 11 percent of these costs.

Technology transfer directors provide a variety of services to local businesses, including market information, sources of capital and raw materials, and ideas for new product research and improvement. According to the directors, initially they had to convince firms to participate in the program, but after three years of operation most business comes through word of mouth. The directors serve as low cost trouble shooters for local businesses, utilizing technical data bases at senior institutions, community college faculty, and their own industry contacts in seeking a solution to a firm's problems.

During FY 1989, technology transfer directors completed 166 projects with clients. Although program directors are based on community college campuses, community college faculty were involved in only 18 percent of these completed projects. College administrators should promote increased interaction between technology transfer directors and other college employees.

Local Centers

Community colleges also engage in specialized economic development efforts at the local level. Seven colleges reported the formation of central offices that act as clearing houses for continuing education, special training, and technology transfer efforts. These "centers" place all college employees involved in economic development activities in close proximity to one another.

For example, Northern Virginia's Center for Business and Government Services is a college-wide office responsible for communicating the college's services to businesses and government agencies throughout the region. After identifying an entity in need of training courses, the center contacts the continuing education office at

the appropriate campus, which then develops and implements the program. Northern Virginia's technology transfer program is also located within the center. If colleges become increasingly involved in economic development activities, each college should evaluate this concept for implementation, as it provides a single interface with the community for economic development services.

Recommendation (32). **Community colleges currently involved in a variety of economic development activities should consider creating an administrative center for economic development which would house special training, technology transfer, and other economic development activities, if such a center has not already been established.**

VII. Planning And Management Information Systems

As a single institution comprised of 23 colleges, the Virginia Community College System (VCCS) must plan effectively at both the system and college levels. The VCCS manages substantial resources in pursuit of its diversified mission. In order to serve all of its constituents in accordance with the mission, the VCCS must direct its resources toward established program goals. This requires an established, active planning function for the system as a whole and for each college.

Management information is a vital element in planning. In order to chart its course, the VCCS needs timely information on internal factors such as enrollments, staffing, and revenues and costs, as well as external factors such as the population and economic vitality of the various regions of the State. A comprehensive management information system is fundamental to planning in a large, complex organization like the VCCS. Easily accessible management information can help the system and the colleges conduct useful institutional research in support of planning.

The VCCS has improved its planning functions substantially since 1975. In 1975, JLARC found that the VCCS needed to improve its systemwide and college planning functions. In particular, there was a need for more management data and the institutional research function needed strengthening. Today, the system is in the midst of a comprehensive master planning process which should serve the VCCS for some time to come. Also, most of the colleges have adequate plans in place, and several have done an exemplary job of planning.

The VCCS has done a commendable job in developing its computing network and computing applications. In 1975 JLARC determined that an adequate MIS was not in place in the VCCS. JLARC recommended that the VCCS accelerate its efforts to develop a comprehensive, systemwide information system. Since that time, the VCCS has put forth an excellent effort in this area, and has established a high quality, distributive computing network to serve the MIS needs of the system office and the community colleges. However, additional improvements are needed to further enhance the MIS capabilities of the colleges.

PLANNING

As a single institution of higher education, the VCCS has one mission statement that provides direction for all of the colleges. The State Board for Community Colleges and the Chancellor are responsible for ensuring that appropriate planning goals are established for the system and the colleges. Planning provides a framework for rationally allocating scarce resources for the competing demands of the various

colleges and VCCS constituencies. The VCCS and the colleges need comprehensive planning processes to ensure that their efforts are complimentary, not contradictory.

In 1975, several shortcomings were identified with system and college level planning. At the system level, the VCCS had not formulated a statewide plan of operation. Several colleges either operated without master plans or utilized outdated information in the development of their master plans. Systemwide and college planning has improved a great deal since that time, however.

Systemwide Planning

In 1975, the VCCS lacked a systemwide plan of operation. System office personnel reported that the first major planning effort conducted after 1975 culminated in the Virginia Community College System Master Plan, 1982-1990. This plan had little real impact on the system, however, because it put forth several hundred recommendations without prioritizing them. The system is currently operating under a long-range plan entitled Toward the Year 2000, published in 1988. The VCCS should be commended for its current long-range planning process. However, given the current situation of increasing enrollments and scarce resources, it appears unrealistic that the VCCS can achieve its recommendations by the turn of the century. The State Board will need to prioritize among the more than 70 recommendations set forth in the plan.

VCCS Long-range Planning Process. Beginning in 1985, the VCCS established a systemwide task force charged with the responsibility of re-examining the mission statement. Task force membership included representatives of the community colleges and other agencies involved with the VCCS. After the mission statement was revised in 1986, the Committee on the Future of the Virginia Community College System was created to outline a strategy for addressing the challenges facing the VCCS. This committee was chaired by the then Assistant to the Chancellor for Special Projects and included college administrators and faculty, system office staff, and representatives of local college boards and the State Board. It began its work by issuing a call for papers on issues central to the mission of the VCCS, and received over 100 papers for consideration.

Following a review of the issue papers, a committee of 100 was appointed to participate in a charrette (a consensus building group process) facilitated by the then president of the American Association of Community and Junior Colleges (AACJC). The committee of 100 included college presidents, State Board and college board members, faculty, staff, students, representatives of business and industry, and executive agency and legislative office staff members.

The end result of the charrette was the publication of the systemwide long-range plan, Toward the Year 2000 in November 1988. This document contains more than 70 recommendations related to curriculum, instruction, programs, facilities, and resources. In interviews, most college presidents said they were pleased with the

development of the plan, especially because all segments of the VCCS constituency were involved in the process.

The publication of Toward the Year 2000 marked the mid-point in the planning process. Next, priorities for systemwide recommendations were established by the State Board following two meetings with local college board chairmen and a questionnaire addressed to a broad cross-section of VCCS leaders, faculty, staff, and students. The State Board established six task forces to examine the most crucial issues facing the system: general education, faculty and staff development, educational telecommunications, continuing education and non-credit instruction, economic development and adult literacy, and the master plan for colleges, campuses and facilities. Task force members were asked to develop specific recommendations for accomplishing the broad goals of the State Board in those respective areas. Five of the six task forces had submitted their final reports as of May 1990.

Evaluation of System Planning. The current long-range planning process was evaluated in comparison with accepted guidelines for higher education planning, obtained from sources including the VCCS Policy Manual, the Southern Association of Colleges and Schools (SACS) Criteria for Accreditation, and academic literature on planning in higher education. By design, the VCCS plan is not a detailed compilation of operational objectives. Instead, the plan provides a number of broad recommendations designed to chart the course of the system through the remainder of this century. Therefore, it was not expected that the plan should contain a detailed plan of action for each college. As mentioned, this approach was tried by the VCCS in the early 1980s and it failed.

Accepted planning guidelines indicate that a number of conditions should exist for successful planning to occur. First, the VCCS should have a clearly defined planning function in place. Second, there should be a current VCCS master plan in place. The plan should contain a clear statement of institutional mission as well as goals consistent with the institutional mission. Finally, the institutional research function should support the planning function, and there should be broad-based involvement in developing the plan.

The VCCS has met all of these requirements in its long-range planning activities. The system planning function currently rests with the Vice Chancellor for Policy Studies, who is supported by the research and planning section of the system office. Toward the Year 2000 is an appropriate system-level planning document. It contains a clear statement of the mission of the VCCS. More than 70 goals and recommendations are presented. The plan is supported by institutional research, incorporating socio-economic trends in Virginia and the nation as well as analysis of VCCS enrollment trends and finances. Through the charrette and the subsequent process of developing task forces, there was broad-based involvement of a variety of VCCS constituents.

The VCCS is now faced with operationalizing its numerous goals during changing times. The VCCS must make difficult choices about resource management in

order to maintain quality, as Chapter II discusses in greater detail. In this situation, it appears doubtful that the VCCS will be able to achieve all of its recommendations by the turn of the century. Using the task force results, the State Board must set priorities among its many planning recommendations if any of the initiatives are to be realized within a reasonable period of time.

College Planning

The 1975 JLARC study identified several concerns with planning at the college level. Eight colleges that were more than three years old had not submitted copies of their master plans to the system office. A number of plans available in 1975 were based upon information that was more than five years old. There was limited comprehension of the fundamental role that research plays in the planning process. In general, college plans represented local interests unrelated to system policies, priorities and needs. There has been substantial improvement in the quality of college planning today, although several colleges need to develop better planning functions.

Evaluation Criteria. Because of the number of community colleges in the system, it was not possible to do a comprehensive evaluation of the entire planning process at each college. Therefore, the evaluation of college planning included an assessment of college master planning documents and other selected aspects of the planning function. Based on the VCCS Policy Manual, the SACS Criteria, and academic literature on planning in higher education, eight fundamental planning guidelines were identified for evaluating individual community college master plans (Exhibit 5).

Evaluation Results. All college master plans in place during the 1988-89 academic year were reviewed. College organizational charts and the results of the JLARC college, faculty, and counselor surveys were examined along with the college master plans in the evaluation of compliance with certain guidelines. Figure 4 presents a summary of how each college's plan fared in the review.

Each college should have a current master plan in place. All college master plans were reviewed to ensure that they extended through the 1988-89 academic year. Three colleges did not have current master plans. Paul D. Camp submitted a list of long range goals for 1990 through 1995, which is not considered to be a full-fledged master plan. Dabney S. Lancaster sent a facilities and enrollment study prepared by the institutional researcher instead of a master plan. And Danville's master plan is outdated, as it was prepared in 1982. This first criteria was used as a screen. Any colleges without a current master plan were not evaluated on the remaining criteria.

College master plans and organizational charts were reviewed to determine whether there is a clearly defined planning function at each college. One of the colleges — Eastern Shore — did not have a planning function defined within the organization.

Exhibit 5

Guidelines For Evaluation Of Community College Planning

1. A current master plan should be in place for each college.
2. Each college should have a clearly defined planning function within the organization.
3. The planning process should provide for broad-based involvement of relevant parties.
4. Each college plan should contain a statement of institutional mission which is consistent with the mission of the VCCS.
5. Each plan should contain goals for achieving the mission.
6. Each plan should contain strategies for achieving goals.
7. Each plan should contain evidence of institutional research support.
8. Each plan should contain provisions for revision within a specified period of time.

Source: Developed by JLARC based on information contained in the VCCS Policy Manual, the SACS Criteria for Accreditation, and academic literature on planning in higher education.

College master plans and the results of the 1989 JLARC surveys of colleges, faculty, and counselors were reviewed for evidence of broad-based involvement of relevant parties in the planning process. The survey results indicate that all colleges had adequate representation in the planning process. Forty-three percent of faculty and 43 percent of counselors surveyed indicated that they had been involved in the master planning process at their colleges.

Each college master plan was reviewed to determine whether it included a statement of institutional mission which was in accordance with the mission of the VCCS. All of the colleges with mission statements modeled them after the VCCS mission statement. Only Eastern Shore submitted a master plan without a mission statement.

All of the college master plans contained goals to assist them in achieving the college mission as well as clearly defined strategies for meeting each goal. These strategies may include implementation schedules and budgetary planning for financial, human, and facilities resources.

Figure 4: College Planning

Key: ○ Adequate ◒ Partial ● Inadequate	1. Is there a current master plan in place?	2. Is there a clearly defined planning function at the college?	3. Is there evidence of involvement of major parties?	4. Is there a statement of institutional mission consistent with VCCS's mission?	5. Are there goals in place to achieve the college mission?	6. Are there strategies for achieving these goals?	7. Does the plan contain evidence of institutional research support?	8. Does the plan contain a provision for revision?
Blue Ridge	○	○	○	○	○	○	○	○
Central Virginia	○	○	○	○	○	○	○	○
Dabney S. Lancaster	●*							
Danville	●*							
Eastern Shore	○	●	○	●	○	○	◒	○
Germanna	○	○	○	○	○	○	○	○
J. Sargeant Reynolds	○	○	○	○	○	○	○	○
John Tyler	○	○	○	○	○	○	○	○
Lord Fairfax	○	○	○	○	○	○	○	○
Mountain Empire	○	○	○	○	○	○	○	○
New River	○	○	○	○	○	○	○	○
Northern Virginia	○	○	○	○	○	○	○	○
Patrick Henry	○	○	○	○	○	○	○	○
Paul D. Camp	●*							
Piedmont Virginia	○	○	○	○	○	○	○	○
Rappahannock	○	○	○	○	○	○	○	○
Southside Virginia	○	○	○	○	○	○	○	○
Southwest Virginia	○	○	○	○	○	○	○	○
Thomas Nelson	○	○	○	○	○	○	●	○
Tidewater	○	○	○	○	○	○	○	●
Virginia Highlands	○	○	○	○	○	○	○	○
Virginia Western	○	○	○	○	○	○	◒	●
Wytheville	○	○	○	○	○	○	○	○

* Colleges without current master plans were not evaluated on the remaining criteria.

Source: JLARC analysis of college master plans.

College master plans were reviewed for evidence of institutional research on internal and external factors affecting the college. In order to design college programs to meet the needs of the localities served, colleges should take into consideration trends in the composition of the student body, as well as relevant social and economic trends in the area. Plans for 17 of the colleges contained evidence of institutional research support. Thomas Nelson did not have any evidence of institutional research support in its plan. Eastern Shore submitted a plan in which only external factors were considered, while Virginia Western only included internal trends in its plan.

College master plans were reviewed to determine whether they contained a provision for revision within a specified period of time. Two colleges did not include a statement indicating when their plans would be revised — Tidewater and Virginia Western.

Although it was not a requirement for this review of planning documents, colleges should implement evaluation procedures as part of the planning process so that progress toward goals can be assessed and incorporated into future planning. Optimally, these evaluation procedures should be described within the planning document. Twelve college plans included clearly defined procedures for evaluating the extent to which educational goals are achieved, and 11 college plans included procedures for utilizing evaluation results to improve institutional effectiveness. The other colleges should consider introducing these items in their master plans during the next planning cycle.

According to the 1989 JLARC surveys of counselors and faculty, college master plans are used by college administrators. Counselors and faculty were asked whether college master plans had a tangible effect on college operations. Forty-eight percent of counselors and 41 percent of faculty surveyed reported that their college master plan had affected college operations.

Finally, four colleges had exemplary master plans in place. These institutions were Germanna, Lord Fairfax, Northern Virginia, and Patrick Henry. Colleges which need more development in the area of planning should refer to these plans as models.

The VCCS is in the process of developing planning guidelines for the colleges. Guidelines are needed to ensure a basic level of planning across the system. The VCCS should implement these guidelines as soon as possible, with the research and planning section of the system office providing support to the colleges in this area.

Recommendation (33). **All community colleges identified as having planning deficiencies at the time of this review should remedy these deficiencies during the next planning cycle. These colleges include Dabney S. Lancaster, Danville, Eastern Shore, Paul D. Camp, Thomas Nelson, Tidewater, and Virginia Western.**

Recommendation (34). **To ensure that all community colleges meet commonly accepted planning criteria, the Virginia Community College Sys-**

tem should continue developing community college planning guidelines and disseminate them by July 1, 1991. The research and planning section of the system office should monitor compliance with these planning guidelines.

MANAGEMENT INFORMATION SYSTEMS

In an organization as large and complex as the VCCS, management information systems (MIS) are critical tools for planning and management. A MIS may be defined as a computerized system for providing information for the planning, control, and operations of an organization. The VCCS centrally manages the functions of finance, budget, personnel, facilities, and academic programs. Management information systems are needed to provide systemwide information for planning and management in each of these areas. At the same time, college administrators need timely, accurate information in order to manage their colleges.

Now that the VCCS and the network have reached maturity, the VCCS needs to further improve its computing systems in five areas. First, the VCCS should improve the MIS capability of the individual colleges through system office support and professional development programs. Second, the physical security of computing hardware at the host and two of the regional computing centers should be improved. Third, a formal quality assurance function should be established within the data services section of the system office. Fourth, the VCCS needs to develop a systemwide application for academic programs management. Fifth, the VCCS should develop a strategy for supporting microcomputing systems.

Local MIS Capability

If the colleges are to manage well in a time of growing enrollments and scarce resources, presidents and their staffs at all colleges will need access to local management information about enrollments, faculty workloads, and costs. In order to plan effectively, administrators need the ability to test alternative scenarios for enrollments, staffing, and funding. Using the standard reports available from systemwide applications, college administrators are limited in their ability to extract and manipulate data for management decision making. Therefore, it is necessary to extract data from the main data bases and manipulate it locally in support of management decisions. Based on interviews with college administrators, some colleges are more capable in this area than others, depending on the abilities of their staffs. Because all colleges need to be managed well, the VCCS should work to increase the local MIS capabilities of those colleges which need more support.

Some colleges have substantial programming expertise and are able to produce a variety of customized management information on short notice. For example, New River has a dean of management services whose primary function is in decision support. New River has developed systems for extracting data from the SIS and

accounting system and manipulating the data on a local-area network in order to project part-time faculty costs into the future. New River appears to be unique in this capability throughout the system.

On the other hand, seven colleges reported in the JLARC college survey that they needed additional system office support in the area of data services. In interviews, administrators at five colleges expressed frustration at not being able to retrieve data in a customized format. The colleges have the option of requesting applications support through the system office, which then delegates the request to one of the regions. However, requests can sometimes take several months to complete because of backlogs. This situation frustrates college administrators and discourages them from exploring alternative information solutions. As one college dean said, "the data is there, we're just not able to access it."

The VCCS should act to provide increased local MIS support for those colleges in need. The data services and research and planning sections should work with the colleges to determine local MIS needs. Support services for applications development and institutional research design should then be targeted toward those colleges most in need. The VCCS should facilitate regular, joint MIS workshops for system office staff and college administrators and computing personnel on a regional or systemwide basis. This will allow the colleges to share common local MIS needs and solutions, as well as general MIS expertise. Professional development topics could be solicited from the colleges, and VCCS or outside personnel could be selected to give presentations or lead workshops.

Recommendation (35). **The data services and research and planning sections of the system office should work with the community colleges to determine needs for local institutional research and management information systems support. Support services should then be targeted toward those colleges most in need of assistance.**

Recommendation (36). **The Virginia Community College System should establish a professional development program, involving system office staff, community college administrators and computing personnel, for the specific purpose of enhancing the local management information systems capability of community college staff.**

Physical Security

Tours and interviews with data services personnel revealed serious physical security problems related to the network (Table 24). Theft security is deficient at the host center, and fire security is deficient at the host center and two of the regional centers. In addition, the VCCS lacks a formal, systemwide plan for disaster recovery. The system is working to establish a plan, and should devote the necessary resources to accelerate the plan.

Theft and Fire Security. Industry guidelines for electronic data processing auditing include recommendations for securing computing systems from theft and fire. Access to computer facilities should be safeguarded through physical security systems. Rooms should be equipped with fire and smoke detectors, and should have fire fighting devices installed. However, water should not be used as the method of fire fighting because of the damage which can be caused to equipment in the case of flooding. Optimally, a halogen gas based fire fighting system should be used. (Halogen removes the oxygen from the area).

Table 24

Physical Security of Regional Network Computing Assets

Key:	✔ = Adequate	✘ = Inadequate

Location	Theft Security	Fire Security	Disaster Recovery Plan
Host System Office	✘	✔	✘
Northern Region Northern Virginia Community College	✔	✔	✘
Eastern Region Tidewater Community College	✔	✘	✘
Western Region Virginia Western Community College	✔	✔	✘
Central Region J. Sargeant Reynolds Community College	✔	✘	✘

Source: JLARC site visit analysis.

The four regional computing centers and the host center were reviewed with regard to these guidelines for physical security. Tours and interviews were conducted at each center. Problems were discovered at the host center at the system office, the eastern regional center at Tidewater, and the central regional center at J. Sargeant Reynolds.

The host center houses an IBM 4381 mainframe computer and a variety of associated support equipment. The center also has areas for storage of magnetic media and documentation, and offices for data services staff. Although security from theft appears adequate for the main computer facility, office areas are poorly secured. Many of these offices contain terminals, personal computers, magnetic media, and documentation. Temporary walls topped by easily dismantled steel grates are the only security measures.

The main computer facility is at risk for fire and water damage. The fire protection system consists of sprinklers with a two-minute delay valve and hand-held fire extinguishers. The valve allows a manual cutoff of the sprinkler to keep it from operating. However, this valve must be activated within two minutes after the general building sprinkler system has been activated. Data services staff reported that this control is not adequate because the room is not staffed 24 hours a day. In the case of a fire in the facility, if the equipment were not damaged by fire, there is a high probability that it would be damaged by water from the sprinkler system. The VCCS internal audit section identified these problems in a 1987 review of the facility, and made specific recommendations to remedy the situation. The VCCS has not acted on these recommendations.

The eastern regional center at Tidewater is at risk for fire damage. Like each of the four regional centers, this center houses two IBM mainframe computers, associated support equipment, magnetic media and documentation, assorted terminals and personal computers, and staff offices. The main computer facility, while it has a fire alarm system, has no fire fighting device other than hand-held fire extinguishers. The computer center is scheduled to move to a new facility on campus by the end of 1991. According to college administrators, the new facility is expected to have a better fire response system.

The central regional center at J. Sargeant Reynolds is also at risk for fire damage. The main computer facility has a fire alarm, but the only fire fighting devices are hand-held fire extinguishers. Magnetic media and documentation are stored in the main computer facility, leaving these materials at risk along with the hardware equipment.

Recommendation (37). **The Virginia Community College System should improve the physical security of computing assets at the host, eastern, and central computing centers.**

Disaster Recovery. The goal of a disaster recovery plan is to allow a computing center to resume operations as soon as possible after a disaster such as a fire or flood. Typical components of a disaster recovery plan include key staff responsibilities, the location of systems and applications software backups, and backup hardware facilities.

The provision of backup hardware facilities is perhaps the most difficult decision in disaster recovery planning. A backup facility, or "hot-site," is an alternate

computer which will effectively run the organization's systems and applications software. Many organizations purchase insurance policies with hot-site vendors who promise to provide backup facilities in the case of disaster. However, these insurance policies are very expensive. The VCCS is fortunate because host and regional centers have the potential to act as mutual hot-sites in case one center is disabled.

The four regional centers have unofficial disaster recovery plans which vary in scope and detail. These plans vary in format from written outlines to more comprehensive manuals. However, a comprehensive plan for the entire system, addressing all components of VCCS computing, has never been established. The technical support and operations group in the data services section at the system office has recently initiated a process for developing a comprehensive plan. The VCCS should devote the necessary resources for developing and implementing this plan by July 1, 1991.

Recommendation (38). **The data services section of the system office should develop a disaster recovery plan for the distributive computing network by July 1, 1991.**

Quality Assurance

Considering the size and complexity of the VCCS computing function, quality assurance is an important function. Network equipment and software are constantly being updated and changed. In order to ensure the efficiency of systems and the integrity of financial and student data, standards must be in place for needs assessment, systems development, programming, data manipulation and security, and the physical security of systems.

Currently, there is no formally defined quality assurance function within the data services section. Instead, the same staff who develop systems are responsible for assuring the quality of their own work. Relying on individuals to ensure the quality of their own work is not adequate from the standpoint of internal controls. The Assistant Vice Chancellor for Data Services has identified the quality assurance function as a major need, and the VCCS should act to create this function within data services.

Recommendation (39). The Virginia Community College System should create a formal quality assurance function within the data services section of the system office.

Applications

The major applications on the network are the student information system (SIS), internal accounting system, and fixed asset inventory system (FAIS). These applications serve the core management needs of the colleges and the system office. The SIS and FAIS appear to be meeting the needs of the colleges sufficiently. The internal accounting system is antiquated, but the VCCS is in the process of installing a

new system which is expected to provide improvement. The VCCS could also benefit from additional applications for academic program management and library management.

Student Information System (SIS). The SIS has been operating in its current format on the network since 1984. The colleges appear to be highly satisfied with the SIS. SIS is comprised of three major subsystems: student grade reporting, registration and reporting, and scheduling. Of the 22 colleges surveyed, 21 were satisfied with the grade reporting and scheduling systems, and 20 were satisfied with the registration subsystem (Northern Virginia Community College uses its own computing applications which are parallel to the student information system, internal accounting system, and fixed asset inventory system, and therefore was not surveyed about these applications).

Internal Accounting System. The internal accounting system has been in existence since 1975. A relatively large number of colleges surveyed — 11 of 22 — are dissatisfied with the VCCS internal accounting system. The system is batch rather than on-line, meaning users have to wait until the following day to check the status of newly entered transactions. Also, the system does not provide a local funds accounting capability, meaning the colleges have to use two different accounting systems.

On the other hand, most colleges reported they were pleased with the Generalized Accounting Reporting System (GARS). GARS provides a variety of standard reports on expenditures versus budgets. However, the accounting data base is in a complex format which requires programming expertise to extract accounting data for local manipulation in spreadsheets.

The VCCS has purchased a new accounting system which is an on-line system. The new system will also have components for State funds and local funds. It is expected to be easier to extract data from the new system for local manipulation. The local funds component of the new system is scheduled for implementation by July 1, 1991. The State funds component is scheduled for implementation in the following year.

Fixed Asset Inventory System (FAIS). The FAIS was implemented in 1981. Most of the colleges (17 of 22) reported they are pleased with this system. One problem with FAIS is that it is not always kept up to date, as pointed out by the Auditor of Public Accounts. Also, some administrators in the system would like to see the FAIS expanded to track the physical specifications of equipment in addition to basic descriptive and location data. However, the colleges are generally pleased with the current status of the system.

Academic Programs. The management of VCCS academic programs could be enhanced in two areas. First, the VCCS could benefit from a central, automated inventory of all programs with information on program titles, program requirements, and status (approved, discontinued, or conditional approval). Currently, the system has only a paper file inventory of program description and approval information. This

manual system makes it overly time-consuming for staff to retrieve program approval information for audit purposes. Also, it is difficult for staff to produce a comprehensive program inventory for the VCCS on demand. An automated system would allow the VCCS to provide program approval information as well as a systemwide program inventory instantaneously. The instructional programs and student services section of the system office has recognized the need for an information system such as this, and has made a proposal for implementing a new system.

Second, the VCCS could benefit from a central source of information on program productivity for all programs. The VCCS should have the ability to easily check the productivity history of programs in anticipation of the State Council of Higher Education for Virginia (SCHEV) reviews of degree program productivity. From the standpoint of effective curriculum management, the VCCS should have easy access to information on diploma and certificate program productivity in order to identify quantitatively unproductive programs. An added benefit would be the ability to identify opportunities for cooperative programs between colleges with unproductive programs in the same academic areas.

Considering these management needs, a logical management aid would be a comprehensive academic program information system which would contain not only program descriptions and status information, but also program productivity information. The primary productivity information — graduates, program majors, and full-time equivalent students — is already available in raw form in the SIS. The program description and status information would have to be entered into the system.

Recommendation (40). **The data services section of the system office should develop a systemwide academic program information system. The system should include information on program descriptions, program status, and program productivity.**

Library. One of the major academic resources in the VCCS is the college libraries. As a single institution of higher education, the VCCS should take advantage of opportunities to share educational resources. A single, automated library system for the VCCS could allow the colleges to share library resources as well as improve local management of inventory and circulation. With its distributive computing network, the VCCS has the infrastructure to implement a system-wide library management program.

Eleven of the 23 colleges have locally developed, automated library systems in place. The major purposes of these systems are to control inventory and circulation. The VCCS has done preliminary research on library systems, and has concluded that there are several very good library systems available for purchase which could serve the needs of the entire VCCS. The VCCS should consider acquiring one of these systems.

Recommendation (41). **The Virginia Community College System should consider acquiring a systemwide application for library management to be run on the distributive computing network.**

Microcomputing Strategy

As in many organizations, microcomputer usage has grown in the VCCS in recent years. This has occurred mostly on an ad hoc basis as colleges have tried to address their administrative and academic computing needs using desktop computer technology. In interviews, data services staff expressed concern that a lack of guidance in this area will lead to the purchase of systems which are incompatible with network technology and systems which are near obsolescence. Also, as microcomputer applications grow, there is a need for policies on application design and documentation which will allow applications to be usable in case the initial developer leaves the VCCS.

Local Area Network and Wide Area Network Support. As the usage of microcomputers has grown, users have faced the practical limitations of microcomputer systems, particularly the difficulty in sharing software and data. According to data services staff, the emergent solution has been to link stand-alone microcomputers together through local-area networks (LANs). Several community colleges have already implemented LANs with the desire to link these configurations with the VCCS network to form a wide-area network (WAN).

WAN configurations have the potential to enhance both the administrative and academic computing capabilities of the colleges. For example, a WAN configuration could allow a college to easily access data from the student information system for local processing using a microcomputer spreadsheet program. In academic computing, students could learn to program in both the mainframe and microcomputer environments using a WAN configuration.

Considering the potential of WAN technology, data services staff expect that more colleges will want these types of systems in the future. Based on experience, network managers at the regions and the system office are concerned that some colleges may not have enough technical expertise to purchase LAN technology which can be effectively linked to the network. Network managers should provide leadership to ensure that colleges do not acquire LANs on a completely ad hoc basis. The data services section should facilitate a systemwide approach for developing a range of LAN solutions which may be adopted by the colleges. The primary criteria for a valid solution should be compatibility with the VCCS network.

General Microcomputer Support. Whether or not they are part of a LAN, all microcomputers need a basic level of hardware and software support. The proliferation of microcomputers in the VCCS raises questions about who should provide this support. There are two key areas for which questions about support must be resolved — hardware support and applications support.

There are a number of important considerations in the purchase of microcomputer hardware. Is the capacity adequate? Is the price reasonable? Is it compatible with current systems at the college? Is it compatible with LAN technology? Will it be compatible in a WAN configuration? Is a service contract necessary? If not, who will provide maintenance and service? According to the regional managers, it is not clear whether the colleges or the regional centers should provide guidance and support in these areas.

The colleges currently have a number of microcomputer software applications in place or under development. Common application areas include budget, local funds accounting, and personnel. Data services staff report that, like many large organizations, the VCCS is experiencing difficulties because a large number of these applications lack adequate planning and documentation. When the original developers resign, it is difficult for applications support personnel in data services to troubleshoot and operate these applications.

When applications are developed with proper planning and documentation, new personnel can step in and utilize the application fairly quickly, so that college operations are no longer dependent on an individual but on a well-defined application. The data services section of the system office should establish a policy to ensure that microcomputer applications are adequately planned and documented before implementation.

Recommendation (42). **The Virginia Community College System (VCCS) Chancellor should establish a policy for the management and support of microcomputer technology in the VCCS. The policy should address the following areas:**

- **guidelines for purchase and support of local-area and wide-area network technology,**

- **development and dissemination of standards for microcomputer applications,**

- **microcomputer hardware support.**

Responsibility for each of these areas should be assigned to system office personnel, regional computing center personnel, or college personnel, as is considered appropriate.

VIII. Organization Of The System And The System Office

The organization of the Virginia Community College System (VCCS), as one institution of higher education composed of 23 individual colleges, has many advantages. The colleges can speak with one voice to the legislative and executive branches. The configuration also provides for statewide policymaking and conflict resolution.

For the most part, the colleges do operate as a system. All 23 presidents said the configuration is appropriate for the needs of their individual colleges. There are numerous instances where the colleges work cooperatively to share funding and program resources. In at least one instance, however, a college has operated to the disadvantage of other colleges in violation of system agreements.

In addition, the atypical configuration of the VCCS has raised concerns regarding the appropriate roles of some components of the system, including colleges and local college boards. However, evidence suggests these concerns are unsubstantiated.

The organization of the system calls for both central support and oversight functions to be provided. System office staff carry out these functions. Differing perceptions exist regarding the role of the system office, however, and a clarification of the system office's role is needed. In addition, the system office needs to improve oversight of the colleges in some areas. Some support services currently performed by the system office could be decentralized. Problems were also identified with communications and with the Chancellor's span of control.

ROLES AND RESPONSIBILITIES OF SYSTEM COMPONENTS

The current organization of the VCCS as a single institution of higher education raises several questions about its operation as well as the roles and responsibilities of system components. First, do the colleges operate as a system? Second, is there an adverse impact on the system from very large and very small colleges? Third, are the current powers of the State Board for Community Colleges and the local boards appropriate? Fourth, are the colleges faced with unnecessary duplication of work in responding to both State Council of Higher Education for Virginia (SCHEV) and system office demands?

Analysis in these areas shows that system components appear to be operating appropriately for the most part. Colleges generally work in the best interests of the system as a whole, although this is not always the case. There does not appear to be an adverse impact on the system from very large or very small colleges. The powers

granted to local boards appear to be appropriate, given their role in the system. And, while there is some duplication of effort between SCHEV and the system office, this duplication appears necessary and appropriate.

Role As a System

Colleges should operate cooperatively, as a system rather than as independent entities. There are many examples of such cooperation among the colleges. For instance, Lord Fairfax and Germanna community colleges share a center in Fauquier County. Eastern Shore and Tidewater have a cooperative nursing program. Northern Virginia's advances in instruction through telecommunications courses will be shared with the other colleges.

JLARC staff noted one instance in which Virginia Western Community College did not work cooperatively within the system. Virginia Western Community College's inmate education program operated in 40 correctional facilities throughout the State from January 3, 1986, through April 30, 1990, without the knowledge of the system office or the other community colleges. Virginia Western received tuition and State funding for participants in these credit classes, even though only one of the facilities is in Virginia Western's service region. For the 1988-89 academic year, 345 inmates participated in the Virginia Western program, with an estimated $105,000 in State general fund appropriations received by the college.

Some of the other community colleges also operated inmate education efforts in the same facilities. For instance, both Southside Virginia and Virginia Western operated in the Brunswick and Nottoway correctional centers, located in Southside Virginia's service region. Other community college presidents did not know of Virginia Western's classes in their service regions. In addition, the system office staff did not know of Virginia Western's credit offerings in other colleges' service regions.

On the other hand, when the Virginia Department of Transportation needed statewide training, the effort was coordinated by the system office. Each college was thus allowed to receive a fair share of funding for the program and the cost of the program was divided proportionately. A similar approach should have been used for the Virginia Western inmate education program. A formal policy addressing these types of coordinated efforts should be added to the VCCS Policy Manual.

Recommendation (43). **The Virginia Community College System Chancellor should require that educational efforts involving multiple college service regions be coordinated at the system level.**

Role of the Colleges

The system's configuration raises concerns about the impact very large and very small colleges have on the system. At issue are the largest of the colleges, Northern Virginia, and the smallest, Eastern Shore.

Having a college the size of Northern Virginia has been an advantage for the system and has allowed the college to play a distinct role. Northern Virginia has gained national recognition for the system and has shared innovative programming and assistance with the other colleges in the system. Larger size allows Northern Virginia to produce efficiencies, making up for less productive, smaller colleges. Of the 23 presidents, three indicated during their interviews that they thought Northern Virginia had an adverse impact on the system. One of these presidents complained that with Northern Virginia Community College developing programs first, the other colleges were forced to follow their lead. However, even two of the three presidents concerned about Northern Virginia's impact said that having Northern Virginia in the system is actually an advantage. Indeed, several of the presidents were concerned that the system was actually holding back Northern Virginia and other strong, innovative colleges.

Eastern Shore Community College, due to its isolated location, will likely never be as productive as the other colleges. However, a key component of the VCCS mission is geographic access, and the college provides that access for Eastern Shore residents. Two of the presidents thought Eastern Shore Community College had an adverse impact on the system as a whole, due to its relatively high cost per student. However, all 23 presidents said providing access to Eastern Shore residents was worth the extra cost.

While some presidents thought the system could save money by having the Eastern Shore facility become a campus of Tidewater, the cost savings would be small. Eastern Shore already has fewer administrative staff members than the other colleges, and students would still have to be served with the same facilities. In addition, since the cultures and economies of the two areas are quite different, it may be more difficult for Tidewater to meet Eastern Shore's local needs. There would also be some administrative difficulties for Tidewater given Eastern Shore's location. The two colleges are already engaged in some cooperative ventures to provide Eastern Shore students with program opportunities not available otherwise. These arrangements should be encouraged.

Role of State Board and Local College Boards

The *Code of Virginia* specifies that the establishment, administration, and management of the VCCS is the responsibility of the State Board. The *Code of Virginia* also defines the responsibilities of local college boards, specifying that these boards act in an advisory role to the State Board and perform those duties delegated by the State Board.

The State Board has delegated more powers to the local college boards over the years. For the most part, however, local board powers remain advisory in nature. Recommendations are made to the State Board in such areas as hiring of presidents and locations of new campuses, but the State Board retains final decision-making authority. In a few areas, local boards do have final decision-making responsibility,

chiefly in the development of non-credit, community service offerings and in the administration of local funds. The State Board has specified that it is to be informed of the local funds budget for each college, and is to receive an annual financial report.

The current delegation of local board powers appears to be appropriate given the current funding structure. The amount of local funding is relatively small when compared to State general fund appropriations for the colleges. Powers should be aligned with the funding source for the colleges and it is apparent that State controls are necessary given State funding. Only if there were a change in the funding structure would it be appropriate for additional non-advisory powers to be granted to the local boards.

The college presidents support this position. A clear majority of presidents, as indicated in interviews, thought granting the local college boards additional powers unnecessary. Two of the 23 presidents thought local college boards should be given additional powers in the area of personnel. However, these presidents also noted that their local college boards would be reluctant to assume the attendant liability for personnel decisions. Twenty other presidents, the former Chancellor, and the former State Board Chairman indicated the current delineation of powers was appropriate.

Role of SCHEV

In responses to the JLARC survey of colleges only one college — Virginia Western — reported duplication of effort was required as a result of reporting to both SCHEV and the system office. Also, in interviews, the presidents and system office staff noted an area in which the system office and SCHEV are duplicating work — program approval.

While duplication does exist in this area, it is not inappropriate. SCHEV review in program areas is consistent with its mandate to review — and approve or disapprove — new programs and the productivity of existing programs for public higher education institutions. The VCCS system office must be involved to streamline and coordinate program-related data from the 23 colleges, to ensure internal consistency and approval, and to ensure that appropriate data is available for the broader SCHEV review.

ROLE AND ORGANIZATION OF THE SYSTEM OFFICE

The role of the system office is to carry out both oversight and support functions concerning the State Board, the Chancellor, and the colleges. However, some of the presidents and system office staff believe that the system office has gone beyond oversight, to controlling some day-to-day operations of the colleges. Given confusion over the role of the system office, clarification of its support and oversight functions is necessary.

Enhanced oversight by the system office appears necessary in two areas — college support of foundations and local fund practices. Earlier in this report (Chapter IV), recommendations were made to improve a third area of oversight — system office monitoring of curriculum management.

A review of the support functions of the system office indicates three areas where improvements could be made. One of these areas, enhanced institutional research and computing support for the colleges, was previously discussed in Chapter VII. There are also two areas where decentralization on the part of the system office would appear to enhance operations. These areas involve facilities engineering and personnel transactions.

In addition to reviewing the role of the system office during this study, the organization of the system office was also assessed. Under the old organization, the system office appeared to be logically and appropriately structured, but the Chancellor's span of control was very large and communications problems appeared to exist in the system office. Under the new Chancellor, a revised organizational structure was implemented July 1, 1990. The new structure adds an additional position to upper management of the VCCS. It might also alleviate the two problem areas noted above.

Clarification Needed in the Role of the System Office

The role of the system office is partly to oversee the colleges and partly to support the colleges. This role appears to have evolved from statutory specifications regarding the duties of the Chancellor. The *Code of Virginia* states that the Chancellor's duties are "to formulate such rules and regulations and provide for such assistance in his office as shall be necessary...."

This mixed role appears necessary and appropriate for several reasons. For instance, the system office must oversee reporting from the colleges to SCHEV, the Department of Planning and Budget, and other State agencies to make it consistent with that of a single institution of higher education. On the other hand, not all the colleges have the same levels of staffing or expertise. The system office can provide support to equalize these differences. The role of the system office as both overseer and support provider is also advocated by both the former State Board Chairman and the former Chancellor.

However, while not all presidents addressed the role of the system office in interviews, ten of the presidents have expressed concerns about excessive involvement by the system office. Most of these presidents say they are not opposed to reasonable monitoring, but complain that system office sections, especially those formerly under the division of administrative and fiscal affairs, have gone beyond oversight to controlling day-to-day operations at the colleges. One president, trying to get a position approved for a reorganization of the college's top management, said the system office went beyond oversight, specifying who should be selected for the position by adding certain requirements to the position description. Another president cited excessive

control by the system office finance section over college expenditures, including local funds and college foundation funds.

The perception of another college is illustrated by the following quote from its survey response.

> Under the area of administrative and fiscal affairs, there is a major problem of over-involvement of the system offices. This area makes every effort to micro-manage the day-to-day operations of the individual colleges. The organizational attitude of this area is one of confrontation and control rather than one of service to the colleges. When a cost effective innovation is proposed, rather than saying, "This is a good idea, let us help you implement it," this area tends to say, "This is different, let's find ways to kill it."

In an interview with the college president, the president specifically spoke of over-involvement by the human resources and affirmative action section in position approval, by data services in administrative computing, and by finance in setting administrative fees. System office section managers have also expressed confusion regarding the appropriate balance between service and oversight roles in the system office.

Recommendation (44). **The Virginia Community College System Chancellor should clarify the role of the system office. Specific support and oversight functions for each section of the system office should be clearly described in the VCCS Policy Manual. The clarified role of the system office should be formally presented and discussed throughout the system in meetings with system office staff, community college academic and finance deans, and the Chancellor's Advisory Council of Presidents.**

Improvements Needed in System Office Oversight

A review of oversight functions in the system office indicated that more effective oversight of college support of foundations is needed. In some cases, college local funds, which are public funds, have been transferred from colleges to their foundations. Oversight by the system office in the colleges' use of local funds also needs improvement.

College Foundations. College foundations may be established subject to approval of the State Board. For State Board approval, the VCCS Policy Manual specifies that college foundations must, in their articles of incorporation and bylaws, have a statement of purpose specifying they shall "foster and promote the growth, progress, and general welfare of the local community college and the VCCS...." The VCCS Policy Manual further specifies that the way the college foundations should provide support is through donations and contributions for projects and services of the colleges.

Generally, college foundations contribute to college revenues by providing funding for scholarships, professional development, equipment and materials, and the

construction of facilities. However, in a few cases these foundations have also drawn upon college assets. In three recent instances, college local funds which are public funds have been transferred from a college to its foundation.

> *Beginning in November 1988, Southside Virginia's local board transferred auxiliary enterprise funds from vending machine operations to the college's foundation. In turn, the foundation used the funds to lease an automobile for the president, an activity which could not be undertaken using public funds under the 1988 Appropriations Act. The Attorney General's office declared this transaction inappropriate in April 1989. The college foundation has returned control of the funds to the college and stopped financing the vehicle lease following a July 1989 letter from the Chancellor to the local board.*

In two other cases, college funds were loaned to foundations interest free. From July 1986 to June 1988, the foundation at J. Sargeant Reynolds Community College received loans totalling $735,942. At Southwest Virginia Community College, the foundation received loans totalling $28,774 during FY 1987 and FY 1988.

These situations illustrate how some college foundations have received support from their colleges, which was not the intent for the establishment of foundations. The Auditor of Public Accounts (APA) reports that action has been taken to remedy this situation at both colleges involved — J. Sargeant Reynolds and Southwest Virginia community colleges. While the colleges will be repaid, these funds were unavailable to the college during the two-year period, and the foundations benefited from not having to pay interest on borrowed funds.

The State Board acted on the advice of the Attorney General's office in March 1989 with regard to local fund use and transfers. The State Board inserted the following language into the VCCS Policy Manual:

> Local funds are public funds and subject to all laws, rules, and policies appropriate to public funds including the requirement that public funds may not be transferred to college foundations.

Local Funds. College local funds are locally controlled, unlike State general funds and tuition. Two recent college local fund practices are out of keeping with State statute and sound fund management practices. One of these practices is the previously noted exchange of college and foundation resources. The other regards salary supplements paid through local funds without advance approval.

Salaries of the presidents of State-supported colleges and universities, including community colleges, may be supplemented by non-State funds. However, such funding must be approved in advance by the Governor. The APA found in the FY 1988 review that six colleges — through local funds and in some cases college foundations — paid salary supplements to presidents while failing to comply with the requirement of advance approval. The APA reports that the VCCS has taken corrective action.

The ability of the system office to monitor this practice is impeded by local fund accounting practices at the colleges. The colleges within the VCCS have traditionally been responsible for developing and operating their own accounting system for local funds. However, ten of the 23 colleges surveyed are dissatisfied with their present local fund accounting system.

Allowing individual colleges to develop their own accounting systems for college local funds has resulted in substandard information on these funds. While a uniform chart of accounts for higher education funds exists, many community colleges maintain local funds on a separate chart of accounts. Therefore, the same transaction may be classified differently at different colleges, in some cases without regard to normal higher education accounting practice. Systemwide reporting suffers as a result. A single, unified accounting system for college local funds is a prerequisite for improvement of system office oversight.

The APA has recommended that the VCCS establish a systemwide local fund chart of accounts and purchase a single standardized automated system for local funds accounting. The VCCS recently purchased new accounting software from a nationally recognized vendor with experience in higher education applications. One component of this purchase is a local funds accounting feature. The purchase of the new software has not guaranteed a single uniform local funds reporting mechanism, but has made it possible if all colleges use the software.

Recommendation (45). **The State Board for Community Colleges should require all community colleges to operate with a single chart of accounts for systemwide uniformity in college local fund accounting. Further, the State Board should require all community colleges to begin using the new local fund accounting automated system when it is available.**

Improvements and Changes Needed in System Office Support

There are three areas in which the support functions of the system office could be improved — institutional research and computing expertise, facilities and engineering, and human resources functions. One of these areas, institutional research and computing expertise, has been previously discussed in Chapter VII.

Facilities Planning and Engineering Support. Increasing demands on the staff of the facilities planning and engineering section have decreased service to the colleges in this area. According to the presidents and deans, this has resulted in long delays in facilities projects, illustrated in the following case examples.

> *One college complained of long delays and confusion on a construction project for a classroom building. Due to problems with the architect and the contractor for the project, five years after the work was supposedly completed the college is still fixing defective design and construction work. Redoing the work so far has cost the college*

an estimated $15,000 to $20,000. College administrators attributed these problems to the college being one of nine assigned to a system office engineer in Richmond who was not readily available.

* * *

Another college noted a two-year delay before actual construction could begin on a project to renovate multiple classroom buildings. The renovation included redoing heating and air conditioning systems in these buildings. According to college administrators, the system office engineer assigned to the project had too many other projects to adequately supervise the architect for the project, who was not performing well.

* * *

A third college cited a 14-month delay on repairs to an automotive laboratory. The college president complained that when the contractor for the repairs was not performing adequately, the college had no control over the contractor since only the system office had authority to force the contractor to perform.

As reported in an interview, one president gave up on working through the system office and called a legislator about frustration over long delays. While not all college administrators discussed decentralizing facilities planning and engineering functions, five of the colleges interviewed indicated that this was an area where they would like to have more responsibility.

The former Assistant Vice Chancellor for Facilities Planning and Engineering and the Vice Chancellor for Administrative and Fiscal Services both noted that without the freeze on capital projects due to the State's declining resources, the section would have had increased difficulty keeping up with construction projects. With the expected increase in facilities maintenance and construction needs for the system, this situation will most likely continue to deteriorate.

One option would be to add more positions to the facilities planning and engineering section of the system office. The advantage of this option would be that the direct control and management of projects would remain centralized. The disadvantage would be that these individuals would still be geographically distant from the project sites, and timely response to project concerns could still be a problem.

Another option that should be given serious consideration would be to allow colleges that have qualified staff to be more responsible for facilities engineering and construction. Prior to undertaking any decentralization effort, the system office staff would have to establish criteria for deciding which colleges would be allowed to assume additional responsibilities in this area. In addition, exact responsibilities for the colleges as well as the system office would have to be delineated. Policies and

procedures would have to be drafted to guide the institutions as well as the system office staff overseeing college activities. The system office facilities planning and engineering staff would provide guidance to the colleges as needed.

One advantage of the decentralization option would be that within current staffing levels, the facilities planning and engineering section could increase assistance to colleges not opting for additional responsibilities. In addition, facilities planning and engineering staff would have time to be more proactive, for instance in providing policy guidance to the colleges on site master planning and safety issues such as hazardous waste management. The disadvantage would be a loss of centralized, direct internal control and management capabilities.

Some colleges would not be adequately staffed to provide their own maintenance and construction support and system office staff should continue to provide engineering and construction support to these colleges. In one area of the State, Southwest Virginia, time delays may still result due to the travel time for system office personnel based in Richmond. If the Southwest colleges do not opt to provide their own facilities and engineering support, a system office facilities engineer could be assigned and based in this region. This would improve service to this area. A similar approach has been taken with the internal audit function, with an auditor based in Bristol.

Recommendation (46). **The Virginia Community College System Chancellor should consider decentralizing some facilities planning and engineering responsibilities. Under a decentralization policy, colleges with qualified engineering staff could assume additional responsibilities in engineering and facilities construction. Prior to the initiation of decentralization, policies and procedures regarding the responsibilities of the colleges and the system office should be developed. In addition, if the system office continues to provide engineering and facilities services to Mountain Empire, New River, Southwest Virginia, Virginia Highlands, and Wytheville community colleges, consideration should be given to basing a facilities planning and engineering position in the Southwest region.**

Human Resources. There is considerable duplication and overlap in personnel functions performed by some of the colleges and the system office. The VCCS should evaluate the possibility of giving some colleges the option of assuming additional authority for personnel. For instance, all faculty promotions are currently reviewed and approved by the system office, yet some college presidents have expressed a desire for greater responsibility in this area. Further decentralization should be consistent with the need for retaining policy oversight at the system office as specified in the Decentralization Agreement between the VCCS and the Department of Personnel and Training (DPT).

Presidents noted long delays and rigidity in the personnel area as illustrated in the following examples.

During an interview, a president expressed concerns about the system office's lack of support for innovative personnel practices, such as positions shared between colleges. This president and the president of a nearby college both needed a part-time faculty position in a program where a full-time faculty position could not be justified at either of the colleges. Their request to share a position was denied by system office since it was not covered by the system's personnel policy.

* * *

Also in interviews, other presidents cited long delays in establishing positions. Presidents also complained about the lack of flexibility given to them for faculty appointments and promotion decisions. Twelve of the colleges, in survey responses, indicated they needed less involvement from the human resources section of the system office.

The presidents note that it is rare that the establishment of a position, or an appointment or promotion decision, is not approved by system office. Presidents view the system office as adding another layer of approval in the process.

The community colleges will soon be competing for faculty during a period of faculty shortages. Long delays could hinder their efforts. In some cases, college personnel functions are more fully staffed than the human relations and affirmative action section of the system office. These colleges appear to be adequately equipped to assume more responsibilities in personnel decisions.

If decentralization is advisable, the system office staff should prepare for this in the same way as outlined previously for facilities planning and engineering. Prior to decentralization, criteria for deciding which colleges will be allowed to assume additional responsibilities should be established, the exact responsibilities of these colleges delineated, and policies to guide them drafted. As with facilities planning and engineering functions, the system office would oversee the performance of the colleges and provide assistance when necessary.

Decentralization of additional responsibilities in this area to some colleges would have the advantage of freeing system office human resources and affirmative action staff to work with the other colleges. If this approach is not consistent with State Board needs, the human resources and affirmative action staff should streamline functions to improve service to the colleges and alleviate delays. A recent decision by DPT to allow the system greater responsibilities for classified positions should decrease the current time it takes to establish classified positions.

Recommendation (47). **The Virginia Community College System Chancellor should consider decentralizing additional personnel functions. Under a decentralization policy, some individual colleges with qualified personnel staff could assume additional responsibilities for personnel functions. Prior to the initiation of decentralization, policies and procedures**

regarding the responsibilities of the colleges and the system office should be developed.

System Office Structure

At the time of the JLARC review, the system office was structured under two divisions — academic and student affairs and administrative and fiscal affairs (Figure 5). The new organizational structure implemented July 1, 1990 merges all system office units under a new position of Executive Vice Chancellor (Figure 6). The new structure changes the upper levels of the system office, but has not changed the lower levels.

Various elements of the old system office structure were assessed during the JLARC review including departmentation, chain of command, staffing, span of control, and communications. Although the office structure has been modified, results of the assessment will be briefly reviewed because the new structure addresses two concerns identified during the review.

Departmentation. A central concept of organizational theory is that functions should be organized and aligned (departmentalized) so that unrelated functions are separated and interrelated functions are combined in organizational units. Departmentation accomplishes a number of objectives. Duplication and overlapping efforts can be avoided. One supervisor or manager can oversee similar activities. And accountability can be enhanced.

The old organizational structure aligned agency functions in a reasonable and logical fashion. Areas of operations were separated into distinct sections and divisions and duplicative functions were not observed. None of the ten system office staff members interviewed on this subject cited any difficulties with the allocation of responsibilities between the divisions.

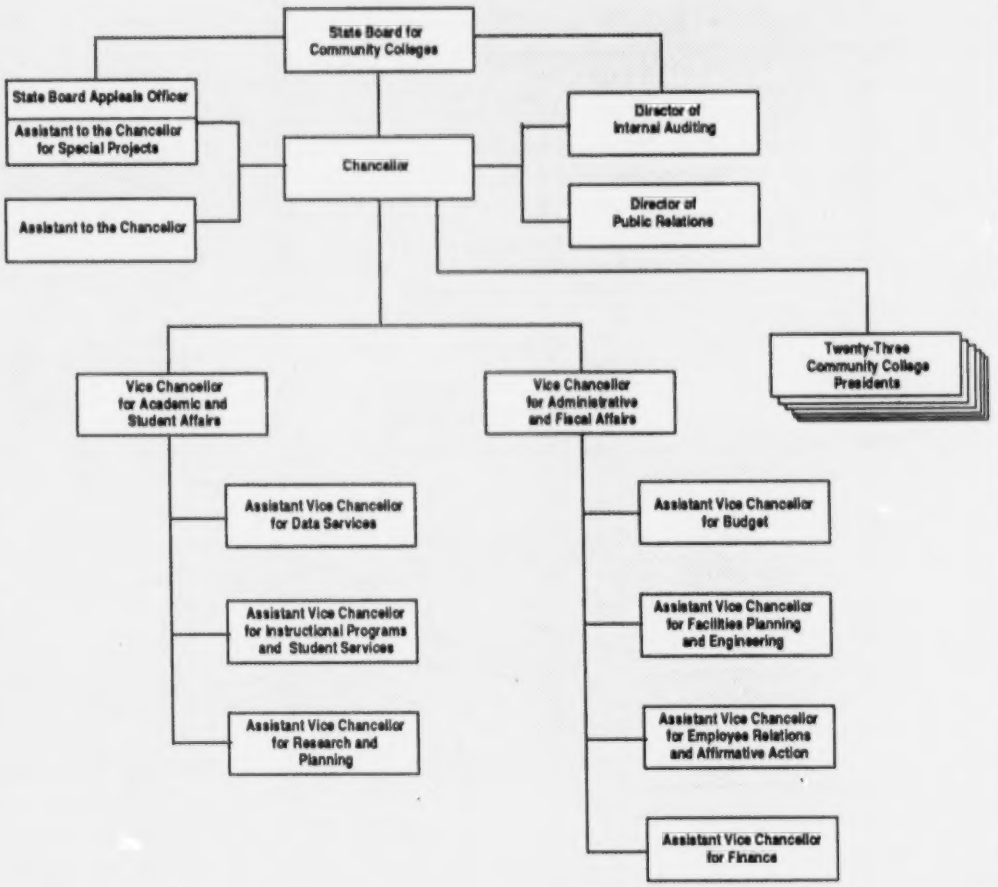
Under the new structure, it is not yet clear how the functions of the vice chancellor positions for academic services and administrative services will relate to the functions of the line units. The Chancellor and the Executive Vice Chancellor will need to monitor activities in these areas to ensure that duplication does not develop. Eventually, these positions may need to be reconfigured.

Chain of Command. Another area where organizations sometimes encounter difficulties concerns the chain of command. The chain of command refers to the line or lines of authority within an agency. Well-defined chains allow for smooth and orderly transfer of information and maintain staff accountability by identifying who is responsible for making decisions and assignments, setting priorities, and evaluating performance.

The chain of command within the old system office structure appeared to be clear and to operate appropriately. None of the system office section managers

Figure 5

Old Organization of the Virginia Community College System Office

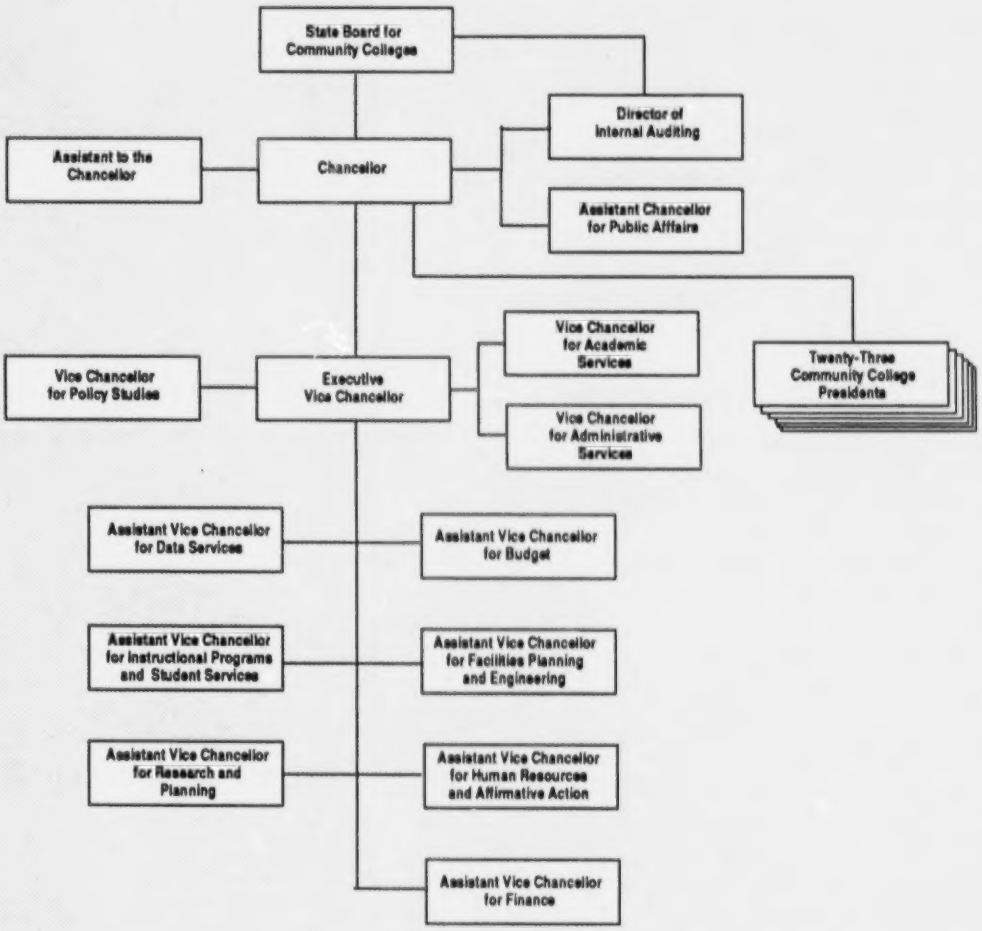

State Board for Community Colleges
State Board Appeals Officer
Assistant to the Chancellor for Special Projects
Assistant to the Chancellor
Chancellor
Director of Internal Auditing
Director of Public Relations
Twenty-Three Community College Presidents
Vice Chancellor for Academic and Student Affairs
Vice Chancellor for Administrative and Fiscal Affairs
Assistant Vice Chancellor for Data Services
Assistant Vice Chancellor for Instructional Programs and Student Services
Assistant Vice Chancellor for Research and Planning
Assistant Vice Chancellor for Budget
Assistant Vice Chancellor for Facilities Planning and Engineering
Assistant Vice Chancellor for Employee Relations and Affirmative Action
Assistant Vice Chancellor for Finance

Note: This structure was in place through June 30, 1990.

Source: JLARC staff graphic based on data from VCCS Chancellor's Office.

Figure 6

New Organization of the Virginia Community College System Office


State Board for Community Colleges
Director of Internal Auditing
Assistant to the Chancellor
Chancellor
Assistant Chancellor for Public Affairs
Vice Chancellor for Academic Services
Twenty-Three Community College Presidents
Vice Chancellor for Policy Studies
Executive Vice Chancellor
Vice Chancellor for Administrative Services
Assistant Vice Chancellor for Data Services
Assistant Vice Chancellor for Budget
Assistant Vice Chancellor for Instructional Programs and Student Services
Assistant Vice Chancellor for Facilities Planning and Engineering
Assistant Vice Chancellor for Research and Planning
Assistant Vice Chancellor for Human Resources and Affirmative Action
Assistant Vice Chancellor for Finance

Note: This structure was implemented July 1, 1990.

Source: JLARC staff graphic based on data from VCCS Chancellor's Office.

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interviewed reported receiving conflicting instructions or demands from higher levels of the organization.

Staffing. The number of positions in the system office have fluctuated over time. In July 1978, there were 188 positions funded by the VCCS for system office operations. Two reorganizations, implemented in 1980 and 1981, lowered the number of system office staff to 150. Budget cuts due to declining State resources in 1982 lowered staff positions to 117. In 1985, a major reorganization further reduced the number of system office positions to 82. Since the reorganization, the State Board has approved additional positions for the system office, increasing the staff to 105 authorized positions.

Although a detailed staffing analysis was not conducted during this study, ten key individuals within the system office, and all of the college presidents, were asked questions regarding system office staffing. The number of staff positions appear to be adequate to carry out the functions of the system office, with the exception of the facilities planning and engineering section as discussed previously in this chapter. The former Chancellor and the majority of system office managers and presidents indicated that present system office staffing levels are appropriate.

Span of Control. Span of control refers to the number of subordinates managed or directed by one person. Span of control is an important aspect of an organization's structure because management effectiveness, as well as agency efficiency, are related to having the necessary number of managers to get the job done. An agency will not function efficiently if there are too many or too few managers.

Guidelines developed by the American Management Association (AMA) suggest that from three to seven employees report to a supervisor for technical or analytical tasks. However, the AMA suggests that a variety of other factors be considered when assessing span of control. For instance, the skills and experience of the subordinates and the complexity of their duties must also be considered.

Using these guidelines, the span of control for section managers in the system office appears appropriate. However, the Chancellor's span of control under the old organizational structure appeared to be too large. In addition to seven system office professional positions that reported to him, all 23 college presidents did as well. The former Chancellor said that many people could not manage his span of control, but it was his preference. The former State Board Chairman thought the span of control of the former Chancellor was too large.

The new structure eliminates the two former divisions of the system office. All section managers and the vice chancellors now report to the new position of Executive Vice Chancellor. This will reduce the span of control of the Chancellor to three professional positions in the system office. All 23 community college presidents will continue to report to the Chancellor.

Communications. Communication within an organization is essential to ensure the efficient and effective operation of the organization. There appeared to be communication problems under the old system office configuration. For example, four of the eight section managers cited communication problems between the various sections. Managers said there had not been a meeting of all system office section managers in several years. The practice of having a reading file of outside correspondence distributed among the section managers also had been discontinued.

However, staff noting communication problems could not give examples of how these problems had adversely affected system operations. Also, section managers within the divisions met together regularly. While specific operational difficulties resulting from communication shortcoming could not be identified, lack of communication between sections appears to have adversely affected morale and creativity. The new Chancellor may wish to increase communication between the various sections of the system office. The alignment of seven line units under the Executive Vice Chancellor in the new organizational structure could help address this problem.

Study Mandate

1989 SESSION

SENATE JOINT RESOLUTION NO.135

Offered January 17, 1989

Identification of higher education study topics by the Joint Legislative Audit and Review Commission.

Patrons-Andrews, Walker, Buchanan, Truban and DuVal; Delegates: Ball, Moss, Murphy, Smith, Quillen, Putney, Wilson, Callahan and Parker.

Referred to the Committee on Rules

WHEREAS, the Legislative Program Review and Evaluation Act (§ 30-65 et seq. of the Code of Virginia) provides for the evaluation of state government according to schedules and areas designated for study by the General Assembly; and

WHEREAS, Senate Joint Resolution No. 18 adopted by the 1988 General Assembly identified higher education as a functional area of state government to be reviewed at such time as sufficient Commission resources become available; and

WHEREAS, § 30-67 of the Code of Virginia provides that prior to the year in which a functional area of government is designated for review, the Joint Legislative Audit and Review Commission may identify to the extent feasible the agencies, programs or activities selected for review and evaluation from the functional area; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That pursuant to § 30-65 et seq. of the Code of Virginia, the agencies, programs, or activities subject to review and evaluation in the functional area of higher education shall be: (i) relationships between secondary schools and institutions of higher education; (ii) the Virginia Community College System; (iii) capital outlay, land, and maintenance; and (iv) a review of the State Council of Higher Education in Virginia; and, be it

RESOLVED FURTHER, That pursuant to the powers and duties specified in § 30-58.1 of the Code of Virginia, the Joint Legislative Audit and Review Commission shall plan and initiate reviews of these agencies, programs, or activities, including consideration of matters relating to any previous Joint Legislative Audit and Review Commission report of these areas; and, be it

RESOLVED FINALLY, That in carrying out this review, the institutions of higher education, the State Council of Higher Education in Virginia, and the Auditor of Public Accounts shall cooperate as requested and shall make available all records and information necessarey for the completion of the work of the Commission and its staff.

Appendixes to this Report

The technical appendix to this report consists of the appendixes listed below, which contain detailed information related to analyses conducted during this study. These appendixes, which are referenced throughout the text of this report, are available for inspection at the JLARC offices, located on the 11th floor of the General Assembly Building, Capitol Square, Richmond, VA 23219, (804) 786-1258.

Appendix A:	VCCS Revenue Sources Compared to Other States
Appendix B:	Study Mandate
Appendix C:	JLARC Survey Responses Referenced in This Report
Appendix D:	Range of VCCS Programs and Services
Appendix E:	VCCS Expenditure Trends
Appendix F:	Staffing Indicators for Individual Community Colleges
Appendix G:	Age and Capacity of VCCS Facilities
Appendix H:	JLARC Enrollment Audit of VCCS Records
Appendix I:	VCCS Program Guide
Appendix J:	Characteristics and Workload of Instructional Faculty and Counselors

Agency Responses

As part of an extensive data validation process, each State agency involved in a JLARC assessment effort is given the opportunity to comment on an exposure draft of the report. Appropriate technical corrections resulting from the written comments have been made in this version of the report. Page references in the agency responses relate to an earlier version and may not correspond to page numbers in this verison of the report.

This appendix contains the following responses:

- The Virginia Community College System
- The State Council of Higher Education in Virginia

Response to the

Joint Legislative Audit and Review Commission

Review of the

Virginia Community College System

July, 1990

Each recommendation in the JLARC review is restated as it appeared in the VCCS exposure draft, as amended, and is followed by the response of the Virginia Community College System.

Recommendation (1).

The Secretary of Education, in collaboration with the State Board for Community Colleges, the State Council of Higher Education for Virginia, the Board of Education, and other appropriate entities, should develop a State policy on adult pre-collegiate education, with roles and responsibilities of various public education institutions clearly defined. Specific attention should be devoted to assessing the appropriateness of community college involvement in adult literacy, Adult Basic Education, and General Educational Development programs. If involvement by community colleges is deemed appropriate, the policy should specify the extent to which the community colleges should be involved with adult literacy, Adult Basic Education, and General Educational Development programs.

- VCCS Response.

The VCCS agrees that a comprehensive State policy on adult pre-collegiate education, as described in this recommendation, is needed. A clear mandate for some organization to address each of the elements of pre-collegiate education, and the provision of concomitant resources, is needed if the Commonwealth is to make necessary progress in reducing the unacceptably high number of adults lacking basic skills. The VCCS would be pleased to participate in such a project.

We believe that community colleges can play a useful role in adult pre-collegiate education and that community colleges are often considered by potential clients for such education to be desirable locations. Pre-collegiate instruction must be appropriately funded and staffed, no matter who is charged with the responsibility for its delivery.

Recommendation (2).

The Virginia Community College System, in conjunction with the Virginia Parole Board, the Virginia Department of Corrections, and the Department of Correctional Education, should conduct research on the cost and impact of inmate education provided by the Virginia Community College System. The research should include, but not be limited to, an assessment of the effects of VCCS education on post-incarceration employment and earnings, as well as recidivism.

- VCCS Response.

The VCCS agrees that the study described in the above recommendation should be undertaken. The VCCS will coordinate its study efforts with the Virginia Parole Board, the Virginia Department of Corrections, and the Department of Correctional Education as well as with the community colleges principally involved in this effort. A study plan will be developed by October 1, 1990. The results of the study are expected to be available by the end of 1991.

Recommendation (3).

The State Council of Higher Education for Virginia staff, in collaboration with the Virginia Community College System staff, should examine the extent to which tuition may be a barrier to enrollment in Virginia's community colleges and report the findings to the State Board for Community Colleges.

- VCCS Response.

The VCCS has formally studied this issue three times in recent years. In addition to the 1986 Virginia Commonwealth University (VCU) study and the 1987 VCCS study cited in this report, a study of the factors influencing students decision-making processes was conducted by the VCU Survey Research Laboratory in the Fall of 1989. Each of these studies was conducted for a different purpose, and their results are presented differently, but all showed that cost was a factor for many students in their decision to attend a community college. All of these studies included only persons who actually attended a community college; none attempted to reach persons who did not attend because of cost.

Another study of the extent to which tuition may be a barrier to enrollment in Virginia's community colleges would likely prove useful, particularly as the

recommendations of the Commission on the University of the 21st Century are considered for implementation.

Recommendation (4).

The Virginia Community College System should impose limits on the percentage of SCHEV guidelines at which individual colleges are allowed to operate. The actual limits should be decided within the VCCS, and should be based on considerations such as educational quality, availability of resources, and the needs of individual community colleges.

- VCCS Response.

The VCCS concurs in this recommendation. As noted in the report, the combined pressures of increased enrollment demand and constrained resources have created some imbalances in VCCS operations which should not be allowed to become permanent practices. The Chancellor and the State Board will provide guidance on the limits of acceptable operations.

Recommendation (5).

The Virginia Community College System should impose limits on part-time faculty usage at the community colleges. The actual limits should be decided within the VCCS, and should be based on considerations such as educational quality, availability of resources, and the needs of individual community colleges.

- VCCS Response.

The VCCS agrees with the analysis of part-time faculty usage presented in this report. It is important that the VCCS begin moving away from excessive reliance on part-time faculty.

It must be understood, however, that if the VCCS limits part-time faculty usage at or near current levels at this time of limited resources, with further reductions in resources imminent, there will be severe limitations on the VCCS's ability to respond to enrollment demands. This will particularly limit the System's ability to respond to the needs of business and industry, and to continuing education generally. The long-range answer to this dilemma must include the provision of increased resources necessary to employ an appropriate number of full-time faculty.

Recommendation (6).

The Virginia Community College System should establish a policy on the management of part-time faculty, including requirements for orientation, supervision, and evaluation of part-time faculty.

- VCCS Response.

The VCCS agrees with this recommendation. A recommendation substantially similar to this was included in Toward the Year 2000, and efforts are already underway to address these needs.

Recommendation (7).

The Virginia Community College System should continue to explore alternative strategies for instructional delivery, including developing additional regional programs which serve two or more service regions and continuing to develop alternative means of course delivery such as telecommunications and extended learning.

- VCCS Response.

The VCCS makes extensive use of regional or multi-college programs in a number of high-cost areas such as nursing and allied health programs. The VCCS also has a number of unique programs at only a single college, such as Funeral Services at John Tyler Community College or Forestry Technology at Dabney S. Lancaster Community College. Regional programs often do not, however, truly serve the whole region. Since community colleges are commuting institutions, often enrollment is largely from the host college's region, with only a scattering from other college regions.

The VCCS identified distance learning and educational telecommunications as high-priority needs in Toward the Year 2000. An educational telecommunications task force was established to develop a strategy for the VCCS in this area. Based on the report of that task force, an expanded task force charged with implementing a VCCS distance learning network was named. This task force has been very active; excellent progress is being made at this time.

Recommendation (8).

The Virginia Community College System should conduct a study of its counseling services to determine: 1) the appropriate role of counselors in the overall education of VCCS students, and 2) the range of activities for which counselors should be responsible. Based on this information, the VCCS should establish minimum counselor staffing guidelines for each college, based on the role and responsibilities of counselors within each institution.

- VCCS Response.

The VCCS concurs in this recommendation. Enrollment demands and reduced resources have combined to cause resources to be diverted from non-instructional areas to fund the employment of part-time teaching faculty. This unhealthy situation cannot be solved quickly without resources to employ additional counselors.

Recommendation (9).

The Virginia Community College System should prepare a long-range facilities master plan which would address major maintenance and renovation needs as well as the construction of new buildings. This plan should inventory current facilities, project current major maintenance and renovation needs, and project the types of buildings that will be required to meet future needs. Proposed projects should be prioritized. In the development of the plan, the VCCS should work with State Council of Higher Education for Virginia staff to develop a consensus on projected space needs.

- VCCS Response.

The VCCS agrees with this recommendation, which closely parallels and extends recommendations contained in Toward the Year 2000 and in the subsequent report of the Task Force on Colleges, Campuses, and Facilities.

This plan will need to be coordinated with an impending study by the State Council of Higher Education for Virginia on community college campus locations.

Recommendation (10).

In the event of continued enrollment growth without increased State resources, the State Board for Community

Colleges should prioritize the program areas of the current Virginia Community College System mission statement for budgeting purposes. First priority should be given to the program areas of college transfer, occupational technical, developmental, and credit continuing education. The State Board may also wish to establish priorities among these for program areas. Second priority should be non-credit continuing education and community service. Last priority should be given to programs not included in the current VCCS mission statement. Within the broad priorities established by the State Board, individual colleges could be given flexibility to allocate resources to meet local needs.

- VCCS Response.

The VCCS concurs in this recommendation. In considering the relative priority of the various components of the mission, the State Board for Community Colleges should consider the current VCCS mission statement, national community college trends, the results of its planning efforts reported in Toward the Year 2000, and the recommendations of the Commission on the University of the 21st Century. Further, as indicated in the recommendation, the great diversity of the colleges in the VCCS, and the differing needs of various regions of the Commonwealth, will have to be considered as the relative priority of the components of the mission are developed. It is likely that the proper mission for the VCCS has changed from the vision contained in the enabling legislation twenty-four years ago.

Recommendation (11).

The State Council of Higher Education for Virginia should modify its higher education funding guidelines to address the VCCS' high proportion of part-time students.

- VCCS Response.

The VCCS agrees with this recommendation.

Recommendation (12).

The Joint Legislative Audit and Review Commission should further review and assess the current practice of specifying individual community college appropriations in the Appropriations Act during its upcoming study of the Commonwealth's budgeting process. This practice should be assessed within the context of statewide budgeting practices.

- VCCS Response.

  VCCS agrees that the study envisioned in this recommendation would be appropriate.

Recommendation (13).

The Virginia Community College System should, in conjunction with the Virginia State Library and Archives, re-examine VCCS policies on retention of records to ensure that a complete audit trail exists for student records transactions. All records of student transactions for registration, schedule changes, or approval to audit classes should be retained by community colleges for an appropriate time period. The internal audit section of the system office should monitor compliance with newly established policies for automated student record keeping through its electronic data processing audit function.

- VCCS Response.

  The VCCS concurs in this recommendation. The VCCS will, in conjunction with the Virginia State Library and Archives, re-examine its policies to assure that a complete audit trail of student records transactions is maintained for an appropriate period of time. As noted in the report, this may include periodic print-outs of student registration transactions when original hard-copy documents are not created.

Recommendation (14).

The Virginia Community College System should expand its policies and procedures for community college personnel who access the student information system registration programs to include training requirements and further limits on access to sensitive student records.

- VCCS Response.

  The VCCS agrees that sensitive student records must be protected from unauthorized access. As stated in the report, the system contains considerable security checks, including logon identification, passwords, and an enforced requirement for periodic password changes. Monthly reports of separated personnel are used to ensure deletion of appropriate passwords and logon identifications.

  But effective security procedures also require continuous training and monitoring of compliance with

policies and approved procedures. The VCCS will review its policies and procedures to ensure that rules governing sensitive data are clear and that procedures related to the practical application of security measures are in place. Periodic training of personnel will be provided as needed and random monitoring of compliance will be conducted to improve the general application of security practices.

Recommendation (15).

The Virginia Community College System should continue to study individual college enrollment trends so as to better plan and manage resources. Studies should focus on understanding enrollment decisions of highly volatile groups such as new part-time students. These activities should be conducted on an on-going basis by appropriate system office personnel in conjunction with individual colleges.

- VCCS Response.

The VCCS concurs in this recommendation. As noted in the recommendation, this is a continuation of current system office practice.

Recommendation (16).

Prior to calculating future allocations, the budget section of the system office should relabel the equipment line item within the VCCS internal resource allocation model to clearly identify the line item as a balancing adjustment.

- VCCS Response.

The VCCS concurs in this recommendation. In the future, the equipment line will display what the System considers to be the minimum requirement for expenditures in equipment to meet maintenance of effort in instructional equipment and other needs. A separate line will be inserted for balancing to available resources and labeled as such.

Recommendation (17).

The State Board for Community Colleges should assess current practice with regard to student fees used to cover operating expenses. In conducting the assessment, the State Board should recognize that the practice of requiring students to pay fees to third party providers: 1) does not appear to be

consistent with State Board policy, and 2) fails to recognize the total operating costs of certain programs and ...ses for which the VCCS receives State appropriations.

After the collection of complete information on current practices throughout the system, the State Board should decide whether operating fees are allowable in some instances, and modify policy to specify conditions under which such fees will be allowed. Policy should also require that no operating fees should be charged to students without the specific authorization of the State Board, regardless of whether the fee is paid to a community college or another entity. The State Board should complete its deliberations and amend its policy by July 1, 1991.

- VCCS Response.

The VCCS concurs in this recommendation. The State Board for Community Colleges needs to provide guidance on all types of student fees and the policies of the State Board must be followed without exception.

Recommendation (18).

Community colleges should comply with section 5.3.0 of the VCCS Policy Manual requiring that all career studies options be approved by the Chancellor. The instructional programs and student services section of the system office should improve its monitoring of compliance with this policy.

- VCCS Response.

The VCCS concurs in this recommendation. Interim procedures for this purpose will be put into place by September 1, 1990. The final solution to this problem will be included in the academic program information system described in conjunction with Recommendation 40.

Recommendation (19).

The Virginia Community College System Chancellor should subject all certificate and diploma programs identified as having failed to meet productivity screening criteria to further evaluation. If these programs cannot be justified in terms of local need or plans for improving productivity, the programs should be discontinued so that resources can be targeted toward programs in greater demand.

- VCCS Response.

  The VCCS concurs in this recommendation. See the response to Recommendation 20, below.

Recommendation (20).

The Virginia Community College System Chancellor should establish productivity standards for certificate programs which are not offered in conjunction with diploma or degree programs and diploma programs which are not offered in conjunction with degree programs. All such programs should be reviewed with regard to these standards every two years.

- VCCS Response.

  The VCCS concurs in this recommendation. The VCCS will establish a productivity review and evaluation procedure with quantitative and qualitative standards, which will be applied to all certificate programs that are not offered in conjunction with a diploma or associate degree program, and for all diploma programs that are not offered in conjunction with an associate degree program. This productivity review will be conducted every two years, in the years falling between the SCHEV degree productivity reviews.

Recommendation (21).

The State Board for Community Colleges should establish formal criteria for defining and distinguishing between credit courses and non-credit courses. In developing the criteria, the VCCS should consider Southern Association of Colleges and Schools criteria and the perspectives of State Council of Higher Education for Virginia academic programs staff in addition to the perspectives of VCCS personnel. These criteria should be published in the VCCS Policy Manual.

- VCCS Response.

  The VCCS concurs in this recommendation. Clear definitions for both credit and non-credit courses will be developed for consideration and approval by the State Board for Community Colleges, and subsequent publication in the VCCS Policy Manual. These definitions will be developed in conjunction with the academic staff of the State Council of Higher Education for Virginia as well as VCCS personnel, and will take into consideration appropriate Southern Association of Colleges and Schools publications.

Recommendation (22).

The internal audit section of the system office should develop and implement procedures for auditing general usage courses. The audit should be designed to verify that general usage courses meet established criteria for credit instruction, and that these courses are of consistent content and structure across the system. General usage courses for fractional credits should be a special focus of the audit.

- VCCS Response.

The VCCS internal audit division is currently performing a risk analysis to determine the priority of auditing functions in the community colleges and system office. This recommendation will be incorporated into the process.

The audit program for general usage courses will include verifying that they meet established criteria for credit instruction and that the courses are of consistent content and structure across the System. Special attention will be given to courses offered for fractional credit.

Recommendation (23).

The internal audit section of the system office should include an assessment of course contact hours as part of the academic integrity audit program. The assessment should encompass both publicized and unpublicized courses, with a particular focus on publicized courses with meeting times to be announced at a later date, and on courses offered in a non-traditional format. The review should include published course schedules, course descriptions, and interviews with instructors.

- VCCS Response.

The VCCS internal audit division currently reviews contact hours as a part of the academic responsibility audit program. The risk analysis referred to in the response to the previous recommendation will rank the priority for auditing this function. Special attention will be given to publicized courses with meeting times to be announced at a later date, and to courses offered in a non-traditional format.

Recommendation (24).

The State Council of Higher Education for Virginia, in cooperation with the Virginia Community College System, should conduct an evaluation of the fractional credit course policy of the VCCS. The evaluation should determine whether fractional credit courses are an acceptable vehicle for meeting the training needs of business, industry and government. If not, then alternative funding policies for funding short training courses for business, industry, and government should be examined. Findings and recommendations should be reported to the Secretary of Education by July 1, 1991.

- VCCS Response.

The VCCS agrees that an evaluation of the use of fractional credit courses should be made and will be pleased to cooperate in such a study.

Recommendation (25).

If the State Board for Community Colleges decides to continue offering fractional credit courses, the Board should enforce its policy on these courses by restricting fractional credit offerings to include only courses for less than one credit provided solely for business, industry, and government. The practice of community colleges offering fractional credit courses to the general public should be terminated, along with the practice of offering fractional credit courses for more than one credit.

- VCCS Response.

The VCCS agrees that the process of offering fractional credit courses should be in compliance with VCCS policy. College course offerings will be monitored and colleges will be held accountable to assure full compliance.

Recommendation (26).

The Virginia Community College System Chancellor should implement a policy on the management of off-campus instruction, with specific guidelines for on-site supervision of instruction, and for monitoring adherence to the administrative policies and procedures of the VCCS. The policy should specifically address the use of part-time faculty in off-campus settings.

- VCCS Response.

  VCCS will develop a policy for the management of off-campus instruction, with specific guidelines for on-site supervision of instruction, and for monitoring adherence to the administrative policies and procedures of the VCCS. The policy will address specifically the use of part-time faculty in the off-campus settings.

Recommendation (27).

The Virginia Community College System Chancellor should direct the college presidents to develop specific strategies for developing faculties which are representative of the racial and gender diversity of the community.

- VCCS Response.

  Community colleges have recently developed Instructional and Administrative Faculty Affirmative Action Plans according to guidelines distributed by the State Council of Higher Education in May, 1990. These plans cover the time period 1990-91 through 1993-94 and contain specific strategies for recruiting and retaining faculties which are representative of the racial and gender diversity of communities. Workforce availability data for the plans are provided by the Survey Research Laboratory at Virginia Commonwealth University.

Recommendation (28).

The Virginia Community College System Chancellor, in cooperation with the presidents, should study the full extent of the difficulties involved in recruiting science and technology faculty, project the System's need for science and technology faculty in the 21st century, and develop strategies for meeting those needs. Salary differentials for science and technology faculty should be among the strategies considered. Findings should be reported to the State Board for Community Colleges.

- VCCS Response.

  The VCCS concurs in this recommendation.

Recommendation (29).

The State Council of Higher Education for Virginia should increase its efforts as a facilitator between the Virginia

Community College System and Virginia public senior institutions with the goal of establishing formal Systemwide articulation agreements with all public senior institutions in Virginia.

- VCCS Response.

  The VCCS concurs in this recommendation. SCHEV could be quite helpful in facilitating the development of Systemwide articulation agreements between the VCCS and Virginia public senior institutions.

  Systemwide articulation agreements have been established with three senior colleges and progress is being made with several other institutions, but continued success will require the concerted effort of other leaders in higher education, including the Secretary of Education and SCHEV. The VCCS plan for responding to the recommendations of the Commission on the University of the 21st Century, recently submitted to SCHEV, contains specific strategies to address transfer articulation.

Recommendation (30).

The State Council of Higher Education for Virginia, in cooperation with the Virginia Community College System and senior institutions, should: (1) establish a standard format for reporting student achievement data on former VCCS students and, (2) establish a task force for the purpose of assessing the performance of former VCCS students in Virginia's senior institutions of higher education.

- VCCS Response.

  The VCCS strongly concurs in this recommendation.

Recommendation (31).

The Virginia Community College System and the Department of Education should conduct or facilitate an evaluation of the dual enrollment program. The evaluation should include a comprehensive assessment of program costs, as well as the extent of dual financing which occurs, as stipulated in the Virginia Plan for Dual Enrollment.

- VCCS Response.

  The VCCS concurs in this recommendation. A similar

recommendation was made by the VCCS/VDOE Articulation Committee on May 10, 1990, and will be included as a priority task in the 1990 Plan of Action.

Recommendation (32).

Community colleges currently involved in a variety of economic development activities should consider creating an administrative center for economic development which would house special training, technology transfer, and other economic development activities, if such a center has not already been established.

- VCCS Response.

The VCCS concurs in this recommendation.

Recommendation (33).

All community colleges identified as having planning deficiencies in this review should remedy these deficiencies during the next planning cycle. These colleges include Dabney S. Lancaster, Danville, Eastern Shore, Paul D. Camp, Thomas Nelson, Tidewater, and Virginia Western.

- VCCS Response.

The VCCS concurs in this recommendation. Several VCCS colleges were granted a moratorium on rewriting and updating master plans during the Systemwide work on planning which led to the publication of Toward the Year 2000. Now that the System document exists, these colleges are updating their plans.

Thomas Nelson and Tidewater Community Colleges have recently completed revised master plans that fully meet all criteria cited in this report.

Recommendation (34).

To ensure that all community colleges meet commonly accepted planning criteria, the Virginia Community College System should continue developing community college planning guidelines and disseminate them by July 1, 1991. The research and planning section of the System Office should monitor compliance with these planning guidelines.

- VCCS Response.

  The VCCS concurs in this recommendation. Work will continue on the community college planning guideline document, which will be disseminated to the colleges prior to July 1, 1991. The Research and Planning Unit will monitor compliance with these planning guidelines.

Recommendation (35).

The Data Services and Research and Planning sections of the System Office should work with the community colleges to determine needs for local institutional research and management information systems support. Support services should then be targeted toward those colleges most in need of assistance.

- VCCS Response.

  The VCCS concurs in this recommendation. As noted in the report, the VCCS computer network puts extensive information for both research and administrative purposes within reach of every college, and the Research and Planning section routinely provides numerous reports to assist colleges in these functions and in the general decision making process. Additional efforts will be made to assure that college personnel are trained in access and use of this information. Further, system office personnel will work with the community colleges to determine their needs for additional support. Support services will be targeted toward those colleges most in need of assistance.

Recommendation (36).

The Virginia Community College System should establish a professional development program, involving System Office staff, community college administrators and computing personnel, for the specific purpose of enhancing the local management information systems capability of community college staff.

- VCCS Response.

  The VCCS concurs in this recommendation and will include training in the use of VCCS management information facilities for less sophisticated users in its already extensive program of data processing professional development.

Recommendation (37).

The Virginia Community College System should improve the physical security of computing assets at the host, eastern, and central computing centers.

- VCCS Response.

The VCCS concurs in this recommendation. As noted in the report, data services personnel in the host and regional sites have proposed enhanced security and fire protection installations, but resource constraints have precluded their acquisition. This matter will receive priority attention as soon as necessary resources can be made available.

Recommendation (38).

The Data Services section of the System Office should develop a disaster recovery plan for the distributive computing network by July 1, 1991.

- VCCS Response.

The VCCS has acquired a computer program to assist in disaster planning and a formal task force has been named to bring the project to completion before July 1, 1991. The VCCS will move toward the practical implementation of this disaster recovery plan as expeditiously as resources will permit.

Recommendation (39).

The Virginia Community College System should create a formal quality assurance function within the Data Services section of the System Office.

- VCCS Response.

The VCCS concurs in this recommendation. The Data Services section has identified this as a required function within the unit, but resource limitations presently constrain the level of activity in this area.

Recommendation (40).

The Data Services section of the System Office should develop a Systemwide academic program information system. The System should include information on program descriptions, program status, and program productivity.

- VCCS Response.

  The VCCS concurs in this recommendation. VCCS Data Services and Instructional Programs personnel have been working on elements of such a system for several months. A functional academic program information system is expected to be in operation by Fall, 1991.

Recommendation (41).

The Virginia Community College System should consider acquiring a Systemwide application for library management to be run on the distributive computing network.

- VCCS Response.

  The VCCS has been actively involved in the analysis and testing of library automation for the past year. Two formal task forces are presently at work. The first group has conducted a comprehensive survey of VCCS library requirements for both automated systems and retrospective conversion and has developed a draft Agency Procurement Request based on the information obtained. The second group is involved in the beta testing of a new major library system which is available on a test basis to all 23 colleges. Progress will continue as resources become available.

Recommendation (42).

The VCCS Chancellor should establish a policy for the management and support of microcomputer technology in the VCCS. The policy should address the following areas:

- *guidelines for purchase and support of local area and wide area network technology,*
- *development and dissemination of standards for microcomputer applications development,*
- *microcomputer hardware support*

Responsibility for each of these areas should be assigned to system office personnel, regional computing center personnel, or college personnel, as is considered appropriate.

- VCCS Response.

  The VCCS concurs in this recommendation. Microcomputer technology is changing rapidly and it is important that VCCS personnel know where they can receive guidance and

assistance in the development of local area and wide area networks that have the potential of interfacing with the VCCS computer network, in the development of microcomputer applications for administrative tasks, and in the maintenance of microcomputer hardware. Policies to this end will be developed and disseminated by July 1, 1991.

Recommendation (43).

The VCCS Chancellor should require that educational efforts involving multiple college service regions be coordinated at the System level.

- VCCS Response.

The VCCS concurs in this recommendation.

Recommendation (44).

The Chancellor of the Virginia Community College System should clarify the role for the System Office. Specific support and oversight functions for each section of the System Office should be clearly described in the VCCS Policy Manual. The clarified role for the System Office should be formally presented and discussed throughout the System in meetings with System Office staff, community college academic and finance deans, and the Chancellor's Advisory Council of Presidents.

- VCCS Response.

The VCCS concurs in this recommendation. As noted in the report, the System Office is in the process of implementing a basic reorganization. As this process continues, formal statements of the support and oversight functions for each section of the System Office will be developed in consultation with the Advisory Council of Community College Presidents and other internal constituent groups. Once the statements have been developed, they will be appropriately published and discussed.

Recommendation (45).

The State Board for Community Colleges should require all community colleges to operate with a single chart of accounts for Systemwide uniformity in college local fund accounting. Further, the State Board should require all community colleges to begin using the new local fund accounting automated system when it is available.

- VCCS Response.

  The VCCS agrees that all colleges and the system office should use the same uniform chart of accounts and a single automated system of accounting for local funds.

Recommendation (46).

The Virginia Community College System Chancellor should consider decentralizing some facilities planning and engineering responsibilities. Under a decentralization policy, colleges with qualified engineering staff could assume additional responsibilities in engineering and facilities construction. Prior to the initiation of decentralization, policies and procedures regarding the responsibilities of the colleges and the System Office should be developed. In addition, if the System Office continues to provide engineering and facilities services to Mountain Empire, New River, Southwest Virginia, Virginia Highlands, and Wytheville Community Colleges, consideration should be given to basing a facilities planning and engineering position in the Southwest region.

- VCCS Response.

  The VCCS will give careful consideration to some decentralization of engineering and facilities construction functions to colleges with qualified personnel.

  Serious consideration was given to the location of a regional project manager in Southwest Virginia several years ago. At that time it was deemed preferable to have all project managers work out of the System Office. With the changes that have taken place since this earlier study, and in consideration of the interest expressed by the colleges in this matter, the issue will be reconsidered.

Recommendation (47).

The Virginia Community College System Chancellor should consider decentralizing additional personnel functions. Under a decentralization policy, some individual colleges with qualified personnel staff could assume additional responsibilities for personnel functions. Prior to the initiation of decentralization, policies and procedures regarding the responsibilities of the colleges and the System Office should be developed.

- VCCS Response.

  The Chancellor will form a study group to identify the functions the colleges would like decentralized, determine whether the State Board for Community Colleges or the Department of Personnel and Training has the authority to grant further decentralization of those functions, and develop criteria regarding the qualification of staff necessary for such decentralization. It will then be possible to assess the advantages, disadvantages, and cost of the proposed decentralization.

[redacted]

COMMONWEALTH of VIRGINIA

Gordon K. Davies
Director

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July 3, 1990

Mr. Philip A. Leone
Director
Joint Legislative Audit and
Review Commission
Suite 1100
General Assembly Building
Richmond, Virginia 23219

Dear Phil:

Thank you for asking the Council of Higher Education staff to review the exposure draft of JLARC's Review of the Virginia Community College System. It is a good report and we look forward to working with you and the VCCS to carry out its recommendations.

I offer comments on a few points for your consideration. My comments generally seek to clarify or expand discussions in the report. They do not reflect disagreement with your findings.

1. The concept of the VCCS as a single institution, while recognized in law, is troublesome. The VCCS is a system of local colleges and campuses that reflect the educational, cultural, and economic needs of their respective localities. The concept of a single statewide institution, while perhaps useful for control from a central office, implies a uniformity of curriculum and policy application that is not necessarily in the best interests of localities. Your recommendations have been written to protect the degree of local autonomy that now exists and the colleges' ability to respond to local needs. I urge you to emphasize the importance of balance between central control of the system and local responsiveness at every opportunity.

   These comments relate to recommendations 12, 44, 45, 46 and 47.

2. JLARC's discussion of the open-door mission of the VCCS raises an important policy question: should resources be considered in determining the capacity of the community colleges to enroll students and provide other services? I

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think the open-door mission has to be constrained by the dollars and staff available to the colleges. If it is not, quality will suffer.

The Commission on the University of the 21st Century perceived excessive dependence upon enrollment growth in our budget procedures for higher education, and urged us to change the incentives to emphasize quality at least as much as growth. This concern applies to the VCCS as well as to the senior institutions.

The draft calls for the VCCS to establish priorities among the elements of its mission. This seems appropriate: the colleges cannot be all things to all people at all localities across the state.

The VCCS should give first priority to credit instruction: transfer, occupational-technical, and developmental (or remedial). It should give second priority to non-credit offerings and support services.

Pre-developmental work, adult literacy training and basic education and General Equivalency Diploma preparation should be community college activities only if the college is the designated provider of these services in a locality and if funding is available to provide them. The energy and indirect costs of administering and conducting these activities is considerable. Your recommendations could help to clarify the VCCS role in these activities.

These comments relate to recommendations 1,2,3,7,9,10,15 and 16.

3. The exposure draft calls attention to the facts that the VCCS is staffed below 100 percent of the Council of Higher Education's guidelines and that average class size exceeds the guidelines.

The guidelines are intended to describe normal practice, not to prescribe class size or staffing levels. They are, in short, like a ruler against which the relative staffing of various colleges and universities can be measured. VCCS staffing should be considered in light of staffing across all of Virginia higher education. A table showing appropriated percentages of staffing guidelines is attached.

There are limits to how many additional students can be served at present VCCS staffing levels, but that decision should be made with sensitivity to local priorities and opportunities for efficiencies. Your recommendations

regarding the use of technology identify a way in which the VCCS can maintain some of its offerings at all locations and increase productivity without sacrificing quality.

These comments relate to recommendations 4,8 and 11.

4. The number of part-time faculty in the VCCS is a problem but one for which there is no simple answer. Considerable flexibility is needed to accommodate the enrollment fluctuations that are common in community colleges. There are curricular reasons for having high numbers of part-time faculty in some disciplines where the ability to attract qualified full-time faculty is limited. The VCCS needs to determine its stable base of enrollment and increase full-time staffing to accommodate that base level. Then we should permit fluctuations of several percent either side of the stable base without changing the staffing level. The Council will work on this approach with the VCCS if it appears promising to JLARC and the VCCS.

   These comments relate to recommendations 5,6 and 26.

5. The transfer of the Division of Industrial Training for the Department of Economic Development determined who would make decisions about providing training as part of a package to attract new industry to Virginia or to encourage the expansion of existing plants. It did not resolve the policy questions related to on-going training and who should pay for it. This issue is a central part of the discussions about both fractional credit hours and the distinction between credit and non-credit offerings. VCCS's role in providing in-service training to private and public employers should be clarified, as should the state policy on funding such activities. Again, we would be glad to work with the VCCS and JLARC on this issue.

   These comments relate to recommendations 18 through 24.

6. The senior institutions in the VCCS should develop better agreements for transfer of students, although we have made good progress in recent years. The Council will work with both parties to improve transfer so it is as easy as possible for the student involved.

   An impediment to progress in creating transfer agreements is the lack of precision and uniformity in the general education component of the VCCS' degree offerings. The senior institutions have to be fairly certain that offerings are equal across the system before they will enter into blanket transfer agreements. They need more precise definitions of general education at community college before

they will sign agreements that guarantee acceptance of all general education credits.

I urge you to emphasize that good transfer agreements require high levels of cooperation by both parties and mutual confidence among faculties. The VCCS might consider sponsoring meetings between faculties of its colleges and the senior institutions to which they send most of their transfer students. Again, we would be glad to help.

The senior institutions all should report to community colleges about the progress of students who transfer from on to the other. We are working on a common format for reporting and are experiencing only isolated incidences of unwillingness to provide reports. Here again, the VCCS responsibility is to show that the reports make a difference; that is, that something changes in the VCCS curriculum because of them.

These comments relate to recommendations 29, 30 and 31.

I am available to discuss these comments with you at any time. Congratulations on preparing a thorough, fair, and insightful report.

Sincerely,

Gordon K. Davies

GKD/sbb

1990-92 Educational and General Positions

YEAR ONE

Institution	1989-90 Appropriated Positions	1990-91 Base Budget Positions	Additional Positions, Governor	Total Positions, Governor	100% of 1990-91 Guidelines(1)	Governor's Recommendation as Percent of Guidelines	Additional Positions, Legislature	Total Appropriated Positions	Percent of Guidelines	Description of Legislative Changes
GMU	1,622.30	1,622.30	61.90	1,684.20	1,928.00	87.4%	1.68	1,685.88	87.4%	Revised Guidelines 0901
ODU	1,699.59	1,699.59	19.85	1,719.44	1,909.67 (4)	90.0%	(4.54)	1,714.90	89.8%	(Revised Guides 0901)/Continuing Ed
UVA (Instr.)	3,797.93	3,797.93	7.70	3,805.63	4,172.20 (5)	91.2%	6.50	3,812.13	91.4%	(Arabic Instr)/High Demand/(Delayed Facil)
VCU (Instr.)	3,194.82	3,194.82	20.90	3,215.72	3,436.00 (6)	93.6%	7.25	3,222.97	93.8%	Executive MBA/Continuing Education
VPI&SU (Instr.)	3,425.16 (2)	3,425.16 (2)	0.00	3,425.16	3,788.60	90.4%	10.00	3,435.16	90.7%	High Demand Disciplines/Equine Center
W&M (Instr.)	1,024.21	1,024.21	0.70	1,024.91	1,087.90 (7)	94.2%	6.80	1,031.71	94.8%	(Delayed Facilities)/Instructional Faculty
Total Doctoral	14,764.01	14,764.01	111.05	14,875.06	16,322.37	91.1%	27.69	14,902.75	91.3%	
CNC	332.17	332.17	0.00	332.17	403.20	82.4%	19.13	351.30	87.1%	Revised Guidelines 0901
CVC	150.24	150.24	0.00	150.24	154.00	97.6%	0.00	150.24	97.6%	
JMU	1,188.45	1,188.45	9.20	1,197.65	1,246.30	96.1%	0.00	1,197.65	96.1%	
LC	391.74	391.74	9.00	400.74	418.00 (8)	95.9%	0.00	400.74	95.9%	
MWC	395.06	395.06	0.00	395.06	428.99	92.1%	0.00	395.06	92.1%	
NSU	835.75	835.50	0.00	835.50	869.20	96.1%	0.00	835.50	96.1%	
RU	877.65	877.65	20.07	897.72	1,036.70	86.6%	11.86	909.58	87.7%	Revised Guidelines 0901
VMI	309.30	309.30	3.10	312.40	292.60 (9)	106.8%	(3.10)	309.30	105.7%	(Physical Plant Guideline Calc Adjustment)
VSU	538.51	538.51	0.00	538.51	502.80	107.1%	10.00	548.51	109.1%	Instructional Program Position Restoration
Total Comp.	5,018.87	5,018.62	41.37	5,059.99	5,351.70	94.5%	37.89	5,097.88	95.3%	
RBC	95.99	95.99	0.00	95.99	105.60	90.9%	0.00	95.99	90.9%	
VCCS (Ex. S.O.)	5,930.31 (3)	5,931.68 (3)	401.14	6,332.82	7,319.60 (10)	86.5%	16.25	6,349.07	86.7%	Dental Hygiene/Guidelines 0901, Assessment/ Manufacturing Training Ctr/(Delayed Facil)
Total 2-Year	6,026.30	6,027.67	401.14	6,428.81	7,425.20	86.6%	16.25	6,445.06	86.8%	
Grand Total	25,809.18	25,810.30	553.56	26,363.86	29,099.27	90.6%	81.83	26,445.69	90.9%	

(1) The 1990-92 Guidelines have been updated, based on December, 1989 enrollment projections.
(2) The 1989-90 appropriated position total and the 1990-92 base budget figures include 14.00 positions for Commonwealth Centers which are appropriated through the Research Division.
(3) The 1989-90 appropriated position total and the 1990-92 base budget figures do not include a one time MEL increase of 330 positions as authorized by Governor Baliles.
(4) The 9.67 positions appropriated for Continuing Education are "non-guideline" and have been added to the guideline totals.
(5) The 1.50 positions deleted for maintenance of delayed new facilities are "non-guideline" and have been deleted from the guideline totals.
(6) The 6.00 positions appropriated for Continuing Education are "non-guideline" and have been added to the guideline totals.
(7) The .70 position deleted for maintenance of delayed new facilities are "non-guideline" and have been deleted from the guideline totals.
(8) The 6.00 positions added by the Governor for the Halifax County/South Boston Continuing Education Center are "non-guideline" and have been added to the guideline totals.
(9) The 3.10 positions deleted as a physical plant guideline calculation adjustment are "non-guideline" and have been deleted from the guideline totals.
(10) The 9.90 positions deleted for maintenance of delayed new facilities are "non-guideline" and have been deleted from the guideline totals.

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1990-92 Educational and General Positions

YEAR IMU

Institution	1989-90 Appropriated Positions	1991-92 Base Budget Positions	Additional Positions, Governor	Total Positions, Governor	100% of 1991-92 Guidelines(1)	Governor's Recommendation as Percent of Guidelines	Additional Positions, Legislature	Total Appropriated Positions	Percent of Guidelines	Description of Legislative Changes
GMU	1,622.30	1,622.30	72.10	1,694.40	2,032.10	83.4%	1.68	1,696.08	83.5%	Revised Guidelines 8901
ODU	1,699.59	1,699.59	19.85	1,719.44	1,964.43 (4)	87.5%	9.71	1,729.15	88.0%	Comm Coll/(Revised Guides 8901)/Cont Ed
UVA (Instr.)	3,797.93	3,797.93	10.60	3,808.53	4,207.40 (5)	90.5%	6.50	3,815.03	90.7%	(Arabic Instr)/High Demand/(Delayed Facil)
VCU (Instr.)	3,194.82	3,194.82	20.90	3,215.72	3,447.10 (6)	93.3%	7.25	3,222.97	93.5%	Executive MBA/Continuing Education
VPI&SU (Instr.)	3,425.16 (2)	3,425.16 (2)	6.50	3,431.66	3,811.80	90.0%	10.00	3,441.66	90.3%	High Demand Disciplines/Equine Center
W&M (Instr.)	1,024.21	1,024.21	0.70	1,024.91	1,093.60	93.7%	16.50	1,041.41	95.2%	Applied Science/Instructional Faculty
Total Doctoral	14,764.01	14,764.01	130.65	14,894.66	16,556.43	90.0%	51.64	14,946.30	90.3%	
CNC	332.17	332.17	1.80	333.97	437.70	76.3%	19.13	353.10	80.7%	Revised Guidelines 8901
CVC	150.24	150.24	0.00	150.24	159.10	94.4%	0.00	150.24	94.4%	
JMU	1,188.45	1,188.45	9.20	1,197.65	1,251.80	95.7%	0.00	1,197.65	95.7%	
LC	391.74	391.74	9.00	400.74	421.80 (7)	95.0%	0.00	400.74	95.0%	
NNC	395.06	395.06	0.00	395.06	438.10	90.2%	0.00	395.06	90.2%	
NSU	835.75	835.50	0.00	835.50	869.20	96.1%	0.00	835.50	96.1%	
RU	877.65	877.65	20.07	897.72	1,022.99	87.8%	11.86	909.58	88.9%	Revised Guidelines 8901
VMI	309.30	309.30	3.10	312.40	292.60 (8)	106.8%	(3.10)	309.30	105.7%	(Physical Plant Guideline Calc Adjustment)
VSU	538.51	538.51	0.00	538.51	506.30	106.4%	10.00	548.51	108.3%	Instructional Program Position Restoration
Total Comp.	5,018.87	5,018.62	43.17	5,061.79	5,399.50	93.7%	37.89	5,099.68	94.4%	
RBC	95.99	95.99	0.00	95.99	107.30	89.5%	0.00	95.99	89.5%	
VCCS (Ex. S.D.)	5,930.31 (3)	5,931.68 (3)	401.14	6,332.82	7,329.50	86.4%	30.15	6,362.97	86.8%	Dental Hygiene/Guidelines 8901, Assessment/ Manufacturing Training Center
Total 2-Year	6,026.30	6,027.67	401.14	6,428.81	7,436.80	86.4%	30.15	6,458.96	86.9%	
Grand Total	25,809.18	25,810.30	574.96	26,385.26	29,392.73	89.8%	119.68	26,504.94	90.2%	

(1) The 1990-92 Guidelines have been updated, based on December, 1989 enrollment projections.
(2) The 1989-90 appropriated position total and the 1990-92 base budget figures include 14.00 positions for Commonwealth Centers which are appropriated through the Research Division.
(3) The 1989-90 appropriated position total and the 1990-92 base budget figures do not include a one time MEL increase of 330 positions as authorized by Governor Baliles.
(4) The 14.83 positions appropriated for Continuing Education are "non-guideline" and have been added to the guideline totals.
(5) The 1.50 positions deleted for maintenance of delayed new facilities are "non-guideline" and have been deleted from the guideline totals.
(6) The 6.00 positions appropriated for Continuing Education are "non-guideline" and have been added to the guideline totals.
(7) The 6.00 positions added by the Governor for the Halifax County/South Boston Continuing Education Center are "non-guideline" and have been added to the guideline totals.
(8) The 3.10 positions deleted as a physical plant guideline calculation adjustment are "non-guideline" and have been deleted from the guideline totals.

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